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APRIL 2024

VOLUME # 41 | ISSUE # 9

MUMBAI | PAGES 80

DYES & CHEMICAL MARKET

Connecting the Chemical Industry Together !

A MONTHLY MAGAZINE DEVOTED TO

DYES | CHEMICALS | PHARMACEUTICALS | API | TEXTILE AUXILIARIES | PAINTS | SOLVENTS | COSMETICS


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- Potassium Chloride (KCL) By Product and Pure
- Copper magnesium Dioxide - By Product
- Copper Ash - By Product

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CphI - Informa Group			
No	**Exibitions**	**Date**	**Place**
1	CPhI North America	May 7-9, 2024	Pennsylvania Convention Center, Philadelphia
2	CPhI Barcelona	Oct 24-26, 2024	Fira Barcelona Gran Via, Spain
3	CPhI Middle East & Africa	Dec 10-12 2024	Riyadh, Saudi Arabia
4	CPhI China- Virtual CPhI	June 19-21, 2024	Shanghai, China
5	CPhI Japan	Apr 17-19, 2024	Tokyo, Japan
6	CPhI Korea	Aug 27 - 29, 2024	COEX, Seoul, Korea
7	CPhI India	Nov 26-28, 2024	Noida, India
MECS (Coating Show)			
1	Asia Pacific Coatings Show	Sept 11-13, 2024	Indonesia
2	Saudi Arabia Coatings Show	2025	Dammam Saudi Arabia
3	Middle East Coatings Show	April 16-18, 2024	Dubai World Trade Centre
4	Coatings For Africa 2024	June 19-21, 2024	Johannesburg, South Africa
DYE+CHEM			
1	Dye+Chem Morocco International Expo	TBD	Morocco
2	Dye+Chem Sri Lanka International Expo	TBD	Colombo Sri Lanka
3	Dye+Chem Bangladesh International Expo	Sept 4-7 2024	Bangladesh
4	44th Dye+Chem Brazil International Expo	July 10-12 2024	Brazil
Red Carpet Events			
1	Bangladesh Int'l Dyes, Pigments and Chemicals Expo	Oct 24-26, 2024	Dhaka, Bangladesh
Turkey (Arkim Group)			
1	InterDye Textile Printing Eurasia	Nov 27-29 2024	Istanbul, Turkey
2	Paint Istanbul TURKCOAT	May 8-10, 2024	Istanbul
3	Paint Expo Eurosia	Apr 09-12, 2024	Messe Karlsruhe
Other Exhibitions			
1	China Interdye Exhibition	Apr 17-19, 2024	The Shanghai World Expo Exhibition And Convention Center(SWEECC)
2	Expo Paint and Coating	Jun 27-29, 2024	Pragati Maidan, New Delhi
3	CIPI	TBD	Mumbai, India
4	Chemspec Europe	June 19-20, 2024	Germany
5	ChemUK Expo	May 15-16, 2024	NEC, Birmingham, UK
6	American Coatings Show	April 30-2 May 2024	Indianapolis
7	China Coat China	Dec 2024	China Import & Export Complex, Guangzhou
8	Interdye China	Apr 17-19, 2024	Shanghai, China
9	Paint Expo Germany	TBD	Messe Karlsruhe Germany
10	India Chem 2024	Apr-18-19 2024	Mumbai Exibition Centre, India
11	Water Expo 2024	Sept 10-12 2024	New Delhi
12	Inacoating 2024	July 30-Aug 1, 2024	JlExpo Kemayoran, Jakarta - Indonesia
13	Expo Paint & Coating	Sept 19-21, 2024	ICC Dhaka, Bangladesh
14	ITM 2024	Jun 4-6, 2024	Tüyap Fair Convention and Congress Center, Istanbul, Turkey

Kishore Kumar

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ORGANIC INTERMEDIATE

1.	Adamantane	CAS RN. 281-23-2
2.	Adamantanamine Hydrochloride	CAS RN. 665-66-7
3.	Benzoyl Chloride	CAS RN. 98-88-4
4.	Benzotrichloride	CAS RN. 98-07-7
5	Chloroethylene Carbonate	CAS RN. 3967-54-2
6.	Dichloromethane	CAS RN. 75-09-2
7.	Aniline	CAS RN. 62-53-3
8.	Aluminium Chloride	CAS RN. 7446-70-0
9.	Chlorinated Paraffin-52	CAS NO. 106232-86-4
10.	Chlorinated Paraffin-70	CAS RN. 106232-86-4
11.	Sodium Hypochlorite	CAS RN. 7681-52-9
12.	Methyl Methacrylate	CAS RN. 80-62-6
13.	Methacrylic Acid	CAS RN. 79-49-4
14.	Diethyl Oxalate	CAS RN. 95-92-1

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For Advertising & Subscription
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EDITORIAL

CHEMICAL MARKET

A MONTHLY MAGAZINE DEVOTED TO THE DYES, CHEMICALS, PHARMACEUTICALS, TRADE & INDUSTRY SINCE 1982

How the Automobile Electric Vehicles (Evs) are Revolutionizing the Economies at Scale

The latest buzz word is that Tesla is entering the Indian Markets. There is a lot of excitement to see Elon Musk visiting India in April 2024. The markets for fully electric vehicles is expanding at a rapid pace. There are naysayers in the industry which are controlled by hedge funds to control the rapid growth of the electric vehicle market because it will affect them as they are heavily invested and controlling the oil market but at the same time, the growth at which the EVs are being adopted is at an all-time high. The worldwide market size for EV was around USD 384.65 B in 2022 and is expected to be around USD 1.5T by 2030. PM Modi has also announced that the vehicles in India will be transitioned to EVs to reduce the dependence on oil imported from around the world! Accordingly, China remains the biggest EV market followed by Europe and then by North America, however with the speed at which the EV marketing in expanding in India may increase its market share of EV adoption. This not only will make EV manufacturers grow but it will also help

- The energy market as more renewable energy will be used to charge the batteries that power the vehicles which in turn will also help increase the solar, wind and hydro power stations
- The solvents and electrolytes that are needed to make these batteries.
- The component manufacturers create components specially designed for EVs
- Create more jobs for component designers and engineers
- Create more jobs for semiconductor industry to design chips for the EVs
- Create more jobs for the software industry to remotely manage charging stations and IOT industry to create sensors to record data and its analysis.
- Recycling of the battery materials is in itself a big incentive which also involves a lot of chemicals to separate out the different materials after the battery has been used for defined recharging cycles.

Generating electricity is not a difficult task, however storing the generated electricity will need massive infrastructure to manufacturer these batteries.

The chemical industry will be at the forefront of all of this because the solvents, electrolytes and metals like Lithium, Cobalt, Nickle, Manganese, Lead, Zinc, Manganese and nonmetals like Graphite will be required to manufacturer large scale industrial size batteries and at the same time, car batteries to store this electricity to power the car. Just imaging a simple electric remote controlled toy car which are there in the market are charged by pencil cell batteries. This toy car has been expanded to a real world car which will run on the same principles but with more sophistication and technology including drive terrain, chemistry to store the energy and components to create the cars.

The governments are also working very hard to reduce dependency on the imports of oil and revolutionize the way we commute. More nuclear power plants will be needed and initially more coal will be needed to power these nuclear plants. The cost of replacing coal with other sources have been historically high but as more renewal energy will be generated and stored in industrial size batteries the coal can be replaced or reduced with the use of Natural Gas and/or Renewable Energy sources which includes solar, wind, hydro, biomass. There does exists concerns related to nuclear waste disposal, safety and proliferation risks but with technological advancement these issues will hopefully get ironed out.

The companies that are working on battery chemicals include Aether Industries, AMI Organics, Tatva Chintan, Himadri Chemicals, Toray Industries, Mitsubishi Chemicals, Hitach Chemicals, Contemporary Amperex Technology Co Limited (CATL) to name a few.

- Rajiv Parikh

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MUMBAI PRICE TREND – 16.03.2024	
Organic & Inorganic Chemicals	Price (Rs/Kg)
Acetone	112+
Phenolic	99+
Sorbic 100 kg	290+
Proplene Glycol Tech	116+
Butyl Carbitol Oucc Tawan	152+
Butyl Carbitol Petronas	155+
Benzoic Acid Wuhan Youji	92+
Adipic Acid Haily	116
Acrylic Acid Sattelite/Sanmu	91
Butyl Cellosolve Lotte Korea Intact	154+
Cyclo Hexanone Tpcc Taiwan Intact	108+
Alphox 500	170+
MIBK	138+
Toluene	90+
Benzene	95+
Ortho Xylen	108+
M. Xylene	95+
IPA.	143+
Meg	58+
Deg.	72+
Bam	143+
Methanol	34+
MTO.	75.50+

NBA	112+
Ethyl Acetate	84+
N. Proponal	93+
Pottasium Carbonate Imp	83+
DCDA	178+
SBC	1575
Soda Tata	1525
Acid	53+
Butyl	111+
B Cell	157+
DA	129+
DMA 40%	57+
EDC	44+
Hexane	72+
MCB	74+
MEK	112+
MMA 40%	49+
N Benzene	86+
N Pac	105+
Octonol	173+
Styrene	109+
VAM	84+
C9	105+
C Hexanone	138+
I Butanol	115+
Formal	20/+

Above prices are given in good faith by : **MR. HITESH C. GOSALIA**

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CHENNAI PRICE TREND – 13.03.2024

Inorganic Chemicals	No of Units Per Pack	Price (Rs/Kg)
Acid Slurry (Soft)	50 Kgs	120.00
Alum- Ferric	50 Kgs	21.00
Ammonium Bicarbonate	25 Kgs	25.00
Ammonium Bi Fluoride [sugar-grade]	50 Kgs	178.00
Ammonium Carbonate	50 Kgs	88.00
Ammonium Chloride	50 Kgs	26.00
Ammonium Nitrate	50 Kgs	30.00
Ammonium Phosphate (Mono)	50 Kgs	135.00
Ammonium Sulphate	50 Kgs	22.00
Antimony Trioxide	50 Kgs	1050.00
Barium Chloride	50 Kgs	58.00
Bleaching Powder (33% Cl)	25 Kgs	14.00
Borax (Granular)	50 Kgs	82.00
Boric Acid (Tech.)	50 Kgs	134.00
Calcium Carbonate (Activate)	50Kgs	18.00
Calcium Carbonate (Precipitated)	50 Kgs	17.00
Calcium Chloride Lump 70%	50 Kgs	14.00
Calcium Chloride-Anhydrous	50 Kgs	24.00
Camphor Oil	200 Litres	135.00
Caustic Potash (Flakes)	50 Kgs	86.00
Caustic Soda (Flakes)	25 Kgs	40.00
Caustic Soda (Prills)	50 Kgs	92.00
Chromic Acid Flakes	50 Kgs	290.00
Chlorinated Xylene	25 Kgs	85.00
Copper Sulphate	180 Kgs	220.00
Di ammonium Phosphate	50 Kgs	34.00
Dioctylmalite	180 Kgs	82.00
Ferric Chloride (Anhydrous)	Naked	44.00
Ferrous Sulphate – Crystals	50 Kgs	16.00
Hydrochloric Acid	Naked	6.00
Hydrogen Peroxide 50%	50 Kgs	34.00
Hyflosupercell	22.7 Kgs	138.00
Litharge	50 Kgs	220.00
Lithopone B301(China)	25 Kgs	112.00
Magnesium Carbonate (Indian)	50 Kgs	130.00
Magnesium Sulphate	50 Kgs	18.00
Mercury	34.5 Kgs	7200.00
Napthaline Balls	50 Kgs	130.00
Nickel Chloride	25 Kgs	625.00
Phosphoric Acid (85% Tech)	50 Kgs	105.00
Potassium Carbonate (Powder)	25 Kgs	110.00
Potassium Carbonate (Granules)	25 Kgs	100.00
Potassium Nitrate	50 Kgs	150.00
Potassium Permanganate [Tech]	50 Kgs	170.00
Potassium Permanganate [Pure]	50 Kgs	200.00
Potassium Phosphate (Di)	50 Kgs	158.00
S.L.E.S	50 Kgs	52.00
Soda Ash Light	50 Kgs	32.00
Sodium Bicarbonate	50 Kgs	33.00
Sodium Bichromate	50 Kgs	180.00
Sodium Bisulphite	50 Kgs	45.00
Sodium Chlorite 50% (India)	50 Kgs	240.00
Sodium Chlorite 80% (India)	50 Kgs	280.00
Sodium Cyanide	50 Kgs	650.00
Sodium Fluoride	50 Kgs	150.00
Sodium Formate	50 Kgs	60.00
Sodium Hexameta Phosphate 68%	50 Kgs	132.00
Sodium Hydrosulphite [China]	50 Kgs	180.00
Sodium Metabisulphite	50 Kgs	45.00
Sodium Nitrate	50 Kgs	52.00
Sodium Nitrite (China)	50 Kgs	68.00
Sodium Silicate	Noted	28.50
Sodium Sulphate (Anhydrous)	50 Kgs	15.00
Sodium Sulphide 50-52% (Flakes)	50 Kgs	58.00
Sodium Sulphide 58-60% (Flakes)	50 Kgs	52.00
Sodium Sulphite 92%	50 Kgs	56.00
Sodium Tri polyphosphate	50 Kgs	101.00
Titanium Dioxide Anatase	25 Kgs	190.00
Titanium Dioxide (Rutile - R-902)	25 Kgs	253.00
Trisodium Phosphate	50 Kgs	36.00
Zinc Chloride Powder (Tech.)	50 Kgs	80.00
Zinc Oxide White Seal	50 Kgs	235.00
Zinc Stearate [Pure]	25 Kgs	175.00
Zinc Sulphate (Tech.)	50 Kgs	58.00
Organic Chemicals	**No of Units Per Pack**	**Price (Rs/Kg)**
Acetic Acid Glacial	35 Kgs	69.00
Acetone	160 Kgs	100.00
Benzene	196 Ltrs.	96.00
Benzyl Alcohol	200 Kgs	180.00
Bisphenol-A (Russian)	25 Kgs	180.00
Bisphenol-A (Russian)	170 Kgs	115.00
n-Butyl Acetate	165 Kgs	123.00
Butyl Cellosolve	195 Kgs	163.00
Camphor	25 Kgs	400.00
Cellosolve –Ethyl	195 Kgs	152.00
Chloroform	300 Kgs	27.00
Citric Acid (Anhy)	25 Kgs	85.00
Citric Acid (Mono)	25 Kgs	68.00
Cresote Oil	50 Kgs	64.00
Cyclohexanone	190 Kgs	154.00
D D Turpentine	200 Ltrs.	145.00
Diacetone Alcohol	195 Kgs	140.00
Diethylene Glycol	230 Kgs	85.00
Dimethyl Formamide	195 Kgs	88.00
Dioctyl Phthalate	200 Kgs	160.00
Di-Pentene	200 Kgs	92.00

EDTA Acid	25 Kgs	248.00
EDTA Disodium	25 Kgs	198.00
EDTA Tetrasodium	25 Kgs	198.00
Ethyl Acetate	185 kgs	99.00
Ethylene Dichloride	200 Kgs	62.00
Ethylene Glycol-mono	230 Kgs	65.00
Formaldehyde	65 Kgs	28.00
Formic Acid	35 Kgs	68.00
Formic Acid	250 Kgs	60.00
Hexamine – Tech	50 Kgs	100.00
n-Hexane	160 Litrs	64.00
Hydroquinone (Imported)	25 Kgs	1150.00
Isopropyl Alcohol	160 Kgs	156.00
Isopropyl Alcohol (Refill)	160 Kgs	140.00
Maleic Anhydride	25 Kgs	110.00
Methyl Ethyl Ketone	166 Kgs	125.00
Methyl Isobutyl Ketone	160 Kgs	163.00
Methyl Isobutyl Ketone (Refill)	160 Kgs	153.00
Methylene Dichloride	250 Kgs	48.00
Methylene Dichloride (Refill)	250 Kgs	40.00
Mineral Turpentine Oil	50 Kgs	105.00
Monochloro Phenol	50 Kgs	120.00
Nitrobenzene	200 Kgs	108.00
Octanol (2-ethylhexanol)	160 Kgs	135.00
Oleic Acid	50 Kgs	135.00
Oxalic Acid (Punjab)	50 Kgs	64.00

Paraffin Wax (White)	50 Kgs	112.00
Para formaldehyde 91%	25 Kgs	115.00
Perchloroethylene	320 Kgs	90.00
Phenyl Liquid	230 Kgs	108.00
Phthalic anhydride	25 Kgs	115.00
Pine Oil 22%	200 Litrs	130.00
Pine Oil 40%	200 Litrs	190.00
Polyethelene Glycol 400	230 Kgs	110.00
Polyethelene Glycol 600	230 Kgs	130.00
Propylene Glycol	215 Kgs	125.00
Poly Aluminium Chloride	25 Kgs	36.00
Red Lead	50 Kgs	220.00
Renine	180 Kgs	72.00
Rosin	17 Kgs	100.00
Sodium Acetate	50 Kgs	33.00
Sodium Benzoate	50 Kgs	108.00
Sorbitol	250 Kgs	52.00
Stearic Acid (cosmetic)	50 Kgs	135.00
Styrene Monomer	185 Kgs	120.00
Terpeneol Perfumery	25 Litrs	230.00
Thiourea	25 Kgs	230.00
Toluene	200 Ltrs	96.00
Trichloroethylene	280 Kgs	85.00
Triethanolamine	210 Kgs	134.00
Vinyl Acetate Monomer	185 Kgs	100.00
Xylene Mixed	185 Kgs	97.00
O-Xylene	185 Kgs	115.00

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Geranium china distributor	1000 Kgs	NA
Details : i want to buy perfumery chemicals from china distributors		

Product Name	Qty	Grade
DI-ETHANOL AMINE, LIQUID	2000 Gallons	Industrial
Details : Please quote the best price with lead time & COA/MSDS.		

Product Name	Qty	Grade
Monoethanolamine, Liquid	60000 Kgs	Industrial
Details : Please quote the best price with lead time & COA/MSDS.		

Product Name	Qty	Grade
MEA	96 Tonnes	Industrial
Details : Please quote the best price with lead time & COA/MSDS.		

Product Name	Qty	Grade
Boric Acid	3 Cans	Any
Details : Please quote the best price with lead time & COA/MSDS.		

Product Name	Qty	Grade
Reagent, Pyridine-Free	2 Cans	Any
Details : Please quote the best price with lead time & COA/MSDS.		

Product Name	Qty	Grade
Silver Nitrate,Cvs 0.1,Ampoule	2 Packets	Industrial
Details : Please quote the best price with lead time & COA/MSDS.		

Product Name	Qty	Grade
Indicator, Universal	10 Cans	Any
Details : Please quote the best price with lead time & COA/MSDS.		

Product Name	Qty	Grade
Corium 4040	250	Industrial
Details : Please quote the best price with lead time & COA/MSDS, Technical document, Brochure of the product, Cost of Shipping to Bangladesh by Sea/AIR (Dhaka Air Port)Both Ways		

Product Name	Qty	Grade
Normal Heptane 99.5%	10 Cans	Any
Details : Please quote the best price with lead time & COA/MSDS.		

Product Name	Qty	Grade
Methanol 99.8%	30 Cans	Any
Details : Please quote the best price with lead time & COA/MSDS.		

Product Name	Qty	Grade
Di-Methyl Disulphide, Liquid	5500 Gallons	Industrial
Details : Please quote the best price with lead time & COA/MSDS.		

Product Name	Qty	Grade
Cyanuric acid CAS No:- 108-80-5	15 Tonnes	Industrial
Details : Please quote the best price with lead time & COA/MSDS.		

Product Name	Qty	Grade
Malononitrile (propanedinitrile)	5 Kgs	Industrial
Details : Please quote the best price with lead time & COA.		

Product Name	Qty	Grade
Selenium dioxide CAS No:- 7446-08-4	25 Kgs	Industrial
Details : Please quote the best price with lead time & COA/MSDS.		

Product Name	Qty	Grade
Corium 4040	1 Ltr	Industrial
Details : Please quote the best price with lead time & COA/MSDS Purpose:- Heavy Duty metal repair compound. It quickly repairs leakes, cracks, fractures, and groves in metal. Technical Parameters:- a. Composed: Base (type A) and Reactor (type B) b. PartNo: 4040 c. Chemical Category: Industrial Chemical d. PackSize: Each Box 1 Set (2 X 500 ml=1000ml) Required Sample for test first. e. Pack Type: Pot (plastic/tin) Year of Manufacture:- Must be 2023 or later. Certificate & Documents of Authentication:- a. Authentic Certificate. b. Classification society/ Standardization certificates.		

Product Name	Qty	Grade
Glycerol	4 Cans	Any
Details : Please quote the best price with lead time & COA/MSDS.		

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Product Name	Qty	Grade
2-Chloroethyl Ethyl Ether CAS No:- 628-34-2	200 Kgs	Industrial
Details : Please quote the best price with lead time & COA/MSDS, with packing details.		

Product Name	Qty	Grade
Mixed Salt Standard Solution	18 Cans	Industrial
Details : Please quote the best price with lead time & COA/MSDS. ASTM D-3230 Mixed Salt Solution.		

Product Name	Qty	Grade
Metal Cleaner	100 Kgs	Industrial
Boric Acid Crystal Pure	60 Kgs	Industrial
Manganese Sulphate	100 Kgs	Technical
Hydrofluoric Acid	50 Kgs	Technical
Nickel Sulphamate	500 Litres	Technical
Details : Packing Size:- 25 Ltr Can Spec : IS 1809 : 1979 Technical Grade Description:- Please quote the best price with lead time & COA/MSDS.		

Product Name	Qty	Grade
Dilute Acetic Acid	50 Tonnes	Chemical
Details : Lead For: P&C Chem Cloud Pvt Ltd Sir , We are dealing in Acetic Acid , Dilute Acetic Acid and Hydrochloric Acid since 1987 here in Ahmed-abad... sir , we are in regularly need of Dilute Acetic Acid... will be waiting for your positive approach... thanks and regards Dinesh Gupta... Haresh Acids and Chemicals Pvt Ltd		

Product Name	Qty	Grade
Starvis 3003F // Viscosity Modifying Agent // 39069090 // BASF CONSTRUCTION POLYMERS GmbH	200 Kgs	Chemical
Details : Lead For: Broadways Chemtech Looking to buy 200kg Starvis, 1000kg Vinapor 2941 DF and 100 kg Kelco Crete DG-F of genuince BASF material		

Product Name	Qty	Grade
Sodium Hypochloride	120 Kgs	Industrial
Details : Need Quotation asap		

Product Name	Qty	Grade
Hydrofluoric Acid	40 Kgs	Industrial
Details : Need Quotation asap		

Product Name	Qty	Grade
Boric Acid	40 Kgs	Industrial
Details : Need Quotation asap		

Product Name	Qty	Grade
TALL OIL	1 Tones	Industrial
Details : Please inform best price, also please share it's GC & lab analysis report & it's COA.		

Product Name	Qty	Grade
CORRIUM Z-199	2	Industrial
Details : Please quote the best price with lead time & COA.		

Product Name	Qty	Grade
Mineral Hydrocarbon Oil	500 Tonnes	Industrial
Details : Parameters Required 0.810 to 0.820 Density 30 to 40 Flash		

Product Name	Qty	Grade
Perfume	10 Kgs	Industrial
Details : Please quote the best price with lead time COA & MSDS		

Product Name	Qty	Grade
Dye	10 Kgs	Industrial
Details : Please quote the best price with lead time COA & MSDS		

Product Name	Qty	Grade
Optical Brightener	10 Kgs	Industrial
Details : Please quote the best price with lead time COA & MSDS		

Product Name	Qty	Grade
Selenium dioxide CAS No:- 7446-08-4	25 Kgs	Industrial
Details : Please quote the best price with lead time & COA/MSDS.		

Product Name	Qty	Grade
Acetic Acid Industrial grade	40 Kgs	Industrial
Details : Need Quotation asap		

Product Name	Qty	Grade
Methacryloyl Chloride CAS# :- 920-46-7	500 Kgs	Industrial
Details : Please share your best offer on basis FOR Ahmedabad along with the COA, delivery time, packing detail and payment terms.		

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Product Name	Qty	Grade
Sodium Thiosulphate Powder	5 Kgs	Industrial
Details : Photo cleaning		

Product Name	Qty	Grade
Nateglinide API [ENA16381]	20 Kgs	Industrial
Paroxetine HCl Hemihydrate API	700 Kgs	Industrial
Flurbiprofen API	5 Tonnes	Industrial
Purified Water (Cas no:- 7732-18-5)	200 Ltrs	Industrial
Methanol (Cas no:- 67-56-1)	200 Ltrs	Industrial
HCL (Cas no:- 7647-01-0)	50 Ltrs	Industrial
Di-methyl Formmide (Cas no:- 68-12-2)	2 Kgs	Industrial
Copper(II) Acetate Mono Hydrate (Cas no:- 142-71-2)	5 Kgs	Industrial
Sodium Carbonate (Cas no:- 497-19-8)	25 Kgs	Industrial
Toluene (Cas no:- 108-8-3)	200 Ltrs	Industrial
2,3 Xylidine (Cas no:- 87-62-7)	25 Ltrs	Industrial
Ortho Chloro Benzonic Acid (Cas no:- 118-91-2)	50 Kgs	Industrial
Isopropyl Alcohol (Cas no:- 67-63-0)	200 Ltrs	Industrial
Dimethyl Sulphoxide (Cas no:- 67-68-5)	200 Lts	Indusr-trial
N-Methyl Piperazine (Cas no:- 109-01-3)	50 Ltrs	Industrial
Ofloxacin Q Acid (Cas no:- 82419-35-0)	50 Kgs	Industrial
Formic Acid (Cas no:- 64-18-6)	25 Kgs	Industrial
Formaldehyde (Cas no:- 50-00-0)	50 Ltrs	Industrial
Dichloromethane (Cas no:- 75-09-2)	200 Ltrs	Industrial
Sodium Borohydride (Cas no:- 16940-66-2)	25 Kgs	Industrial
Methane Sulfonyl Chloride (Cas no:- 124-63-0)	25 Ltrs	Industrial
Acetic Acid (Cas no:- 64-19-7)	50 Lts	Industrial
Hydroxylamine hydrochloride (Cas no:- 5470-11-1)	25 Kgs	Industrial
Erythromycin Base (Cas no:- 114-07-8)	25 Kgs	Industrial
Propionic Anhydride (Cas no:- 123-62-6)	25 Kgs	Industrial
Sodium Lauryl Sulphate (Cas no:- 151-21-3)	25 Kgs	Industrial
MDC (Cas no:- 75-09-2)	200 Kgs	Industrial
Stearic Acid (Cas no:- 822-16-2)	25 Kgs	Industrial
Acetone (Cas no:- 67-64-1)	200 Ltrs	Industrial
Ammonia (Cas no:- 7664-41-7)	50 Kgs	Industrial
Hyflow (Cas no:- 61790-53-2)	50 Kgs	Industrial
Activated Carbon (Cas no:- 7440-44-0)	25 Kgs	Industrial
Ethyl Succinyl Chloride (Cas no:- 14794-31-1)	25 Kgs	Industrial
Sodium Bicarbonate (Cas no:- 144-55-8)	25 Kgs	Industrial
Sodium Hydroxide (Cas no:- 1310-73-2)	25 Kgs	Industrial
Ethyl Acetate (Cas no:- 141-78-6)	200 Ltrs	Industrial
Erythromycin thiocynate (Cas no:- 231-723-1)	50 Kgs	Industrial
(4R)-3-[(25,5R)-5-(4-Fluorophenyl)-2-[(R)-[(4-fluorophenyl) amino] [4-[(trimethylsilyl)oxy]phenyl] methyl]-1-oxo-5-[(trimethylsilyl) oxy]pentyl]-4-phenyl-2- oxazolidinone (CAS NO:- 27277812-8)	500 Kgs	Industrial
(-)-1-[(4-Chlorophenyl)phenylmethyl]piperazine; (R)-1(p-Chlorobenzhydryl)piperazine (CAS NO:- 300543-56-0)	100 Gms	Industrial
2-[2-[4-[(R)-(4-Chlorophenyl) phenylmethyl]-1-piperazinyl] ethoxy]-acetamide (CAS NO:- 909779-33-5)	100 Gms	Industrial
Levocetirizine Dihydrochloride (CAS NO:- 130018-87-0)	100 Gms	Industrial
3-(Trifluoromethyl)-5,6,7,8-tetrahydro-triazolopyrazine Hydrochloride (CAS NO:- 762240-92-6)	2000 Kgs	Industrial
(3R)-N-(tert-Butoxycarbonyl)-3-amino-4-(2,4,5-trifluorophenyl) butanoic (CAS NO:- 486460-00-8)	2000 Kgs	Industrial
Carbonyl diimidazole (CAS NO:- 530-62-1)	2000 Kgs	Industrial
Details : Chemicals Required for Process development Lab Trials, More quantity required after test		

Product Name	Qty	Grade
Drums	2000 Drums	NA
Details : HDPE drums Capacity 200 ltr, 250 ltr, 300 ltr. Please reply at the earliest. Needed on recurring basis		

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Product Name	Qty	Grade
Bromoacetaldehyde Dimethyl Acetal CAS NO:- 7252-83-7	500 Kgs	Industrial
Details : We have the following requirement kindly send your best offer for the same with the lead time and specifications.		

Product Name	Qty	Grade
3-bromo-6-chloro-2-fluorobenzonitrile (CAS:- 943830-79-3)	1000 Kgs	Technical
Bicyclo[3.1.0]hexane-3-one (CAS:- 1755-04-0)	1000 Kgs	Technical
D-expoxone (CAS:- 18422-53-2)	1000 Kgs	Technical
3,5-Difluoroaniline (CAS:- 372-39-4)	1000 Kgs	Technical
Methyl piperidine-4-carboxylate (CAS:- 2971-79-1)	1000 Kgs	Technical
Details : Please Contact for more info		

Product Name	Qty	Grade
PyBOP (Cas no- 128625-52-5)	1 Tonnes	Industrial
Ethyl Pyruvate (Cas no:- 617-35-6)	1 Kgs	Industrial
Details : 1) We have a requirement of the below Chemical kindly quote your best. Pricing along With Recent batch COA and lead time. We need 100kg, 500kg & 1400kg. 2) We have a requirement of the below Chemical kindly quote your best pricing along With COA and lead time.		

Product Name	Qty	Grade
TRANS,TRANS-2,4-HEXADIENYL ACETATE (Cas no:- 1516-17-2) (Hs Code:- 29153900)	10 Tonnes	Chemical
Butyllithium 23% in Hexane (Cas no:- 109-72-8)	2 Tonnes	Industrial
Details : 1) Provide MSDS/Packing certificate. 2) Unit: butyllithium content base 2ton/month , (450L cylinder, 800L Cylinder). Could you give me an estimate of FCL, COA?		

Product Name	Qty	Grade
Anti-Foam/Defoamer	13 Tonnes	Industrial
EDTA 48% / CAS#: 6381-92-6	3 Tonnes	Industrial
Details : Required for Affluent Treatment Plant, about 30T-40T of 40% EDTA would be required per oiler for cleaning. Payment Terms: On Delivery		

Product Name	Qty	Grade
Methane Sulphonic Anhydride CAS NO:- 7143-01-3	30 Kgs	Industrial
Details : Please quote the best price.		

Product Name	Qty	Grade
5-Fluorocytosine CAS# :- 2022-85-7	500 Kgs	Industrial
Delivery: CIP MUMBAI AIR Descripiton:- Pls send best quote along with delivery period.		

Product Name	Qty	Grade
Manganese Dioxide (90%) CAS# :- 1313-13-9	12 Tonnes	Technical
Payment terms : 1 Month Description:- Please send best quote along with COA/MSDS, & 4 Kg Sample required for testing purpose.		

Product Name	Qty	Grade
1-Iodo-2,2-dimethylpropane CAS# :- 15501-33-4	500 Tonnes	Industrial
Details : 1. Quote us your best CIF Air (Shanghai, China) price. 2. Advise us the shortest leading time. 3. Attach your recent batch COA for quality approval.		

Product Name	Qty	Grade
Detergent Solvent "Solvesso 100 (C4 163-180 GOST 10214-78)	2000 Ltrs	None
Solvent 646 GOST 18188-72	90 Ltrs	None
Leads : 1. Technical documentation such as drawings, datasheets and etc./ if applicable 2. All applicable material certificates (COC , MTC, Calibration ,etc.,) 3. Exact or approximate packing information and HS codes. 4. Delivery term we prefer FCA or DAP Baku & for EXW term Pick-up Address. 5. Price offer should be valid 1 month. Other Techinical Details:- Color - transparent or yellowish Density at 200C - 0.860 gr./m3 Volatility (based on xylene) - 8 – 15 Sulfur content - 0.020% Ignition temperature (open crucible) - 270C		

Product Name	Qty	Grade
PeCeVis 100 PS // 39069090 // MBCC Group	1 Tonnes	Any
Leads : Broadways Chemtech		

Product Name	Qty	Grade
Potassium Chloride CAS#:- 7447-40-7	100 Tonnes	Industrial
Details : By product low grade.		

Algenesis Unveils Groundbreaking Biodegradable TPU Material, Pioneering a Future Without Microplastics

SAN DIEGO, March 21, 2024 /PRNewswire/ -- The University of California San Diego (UC San Diego) and Algenesis Corporation, a forward-thinking material science company born from the innovative spirit of UC San Diego, is proud to announce the publication of a seminal scientific study in the fight against microplastic pollution. The study, titled "Rapid biodegradation of microplastics generated from bio-based thermoplastic polyurethane," published this week in Nature's Scientific Reports, is a collaborative effort among researchers from Algenesis and UC San Diego, including Marco Allemann, Marissa Tessman, Jaysen Reindel, Gordon Scofield, Payton Evans, Robert Pomeroy, Michael Burkart, Stephen Mayfield, and Ryan Simkovsky. This publication showcases the development of a revolutionary bio-based and biodegradable thermoplastic polyurethane (TPU) that promises to significantly reduce the environmental and health impacts of plastics and addresses one of the most pressing environmental challenges of our time: microplastic pollution. This innovative new material is the latest product from the Soleic® brand polyurethane materials made by Algenesis, which will be available this year in applications like coatings and injectable plastics

Microplastics are tiny, nearly indestructible fragments shed from everyday plastic products. Research has shown that they accumulate in our oceans and ecosystems, and, alarmingly, within human bodies themselves. Recent studies published in the New England Journal of Medicine and Toxicological Sciences have demonstrated the presence of microplastics in human placentas and heart plaques. The presence of these particles is a direct threat to human health, and they are associated with increased mortality. These findings point to an urgent need to remove existing microplastics from the environment, while simultaneously adopting sustainable materials that do not produce these persistent microplastics.

Algenesis' latest breakthrough is the development of a bio-based TPU that directly addresses the microplastics crisis thanks to its biodegradability. Algenesis demonstrated in its study that tiny plastic particles from this new TPU are able to rapidly biodegrade under home composting conditions. For the study, they purposely generated microplastics from the TPU material using a belt sander, and then studied how these particles biodegrade in the natural environment. They discovered that even common soil microorganisms are capable of growing on the microplastics, and use them as their sole carbon source. These bacteria eat these transient plastics and turn them into harmless nutrients and carbon dioxide. This work is a step towards reducing pollution by creating material from natural plant sources (instead of petroleum) and ensuring that these materials won't leave lasting microplastic waste in the environment.

Co-founded by a trio of esteemed UCSD scientists—Stephen Mayfield, Michael Burkart, and Robert "Skip" Pomeroy—Algenesis has been at the forefront of sustainable material innovation, with previous developments including foams that biodegrade in compost, soil, and marine environments. These foams have been incorporated into shoes with their direct-to-consumer brand Blueview® Footwear (https://blueviewfootwear.com/), and in products developed via their business-to-business materials brand, Soleic®, including coated fabric made by Trelleborg and phone cases made by RhinoShield, that will be available later this year.

"The petroleum plastic products that are all around us now, including recyclable plastics, are constantly shedding microplastics through daily use, wear and tear, and the recycling process itself. Even though they are tiny, they don't go away at the molecular level and because microplastics are so small, they are the most difficult form of plastic pollution to clean up," said Ryan Simkovsky, Chief Technology Officer for Algenesis and the corresponding author of the publication. "Through a combination of direct visualization, respirometry, microbiology, and analytical chemistry, our team has demonstrated if or when our Soleic® plastics generate microplastics, they will only be transient in nature and will rapidly decompose in the environment, because common microorganisms are capable of biochemically eating them as nutrients. This has to become the future of all plastics, as we simply cannot continue to pollute our planet and our bodies with microplastics.

The study further illustrates the material's practical applications through the creation of TPU-coated cotton fabrics and injection molded phone cases, both of which meet physical specifications for commercial products. Both applications underwent rigorous testing, showing clear structural degradation and significant biofilm formation, indicating real-world biodegradability.

Algenesis' partnership with Trelleborg underscores the material's versatility and potential to disrupt industries ranging from aerospace applications to outdoor apparel. "Trelleborg aims to develop a range of eco-friendly polymers and production processes that align with the growing demand for sustainable materials in various applications," added Steve Brockman, Trelleborg Business Unit President. "Our collaboration with Trelleborg enables us to bring this cutting-edge material to market, offering consumers sustainable alternatives that don't compromise on quality or performance," added Stephen Mayfield, CEO of Algenesis.

RhinoShield, one of the world's top producers of tech accessories will be launching a Soleic® injectable smart phone case made from the new bio TPU material. "RhinoShield is looking forward to teaming up with Algenesis to tackle the world's plastic issue. We're equally enthusiastic about establishing sustainable standards for the phone case industry" said Eric Wang, CEO of RhinoShield.

Algenesis' biodegradable TPU material represents a major leap forward in reducing the production and accumulation of microplastics, thus safeguarding our ecosystems and human health. This innovation aligns with Algenesis' mission to lead the way in creating materials that are not only high-performing but also inherently kind to the planet.

Read the full report : http://news.cision.com

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Dow Scientists Develop a Novel Polyethylene Architecture

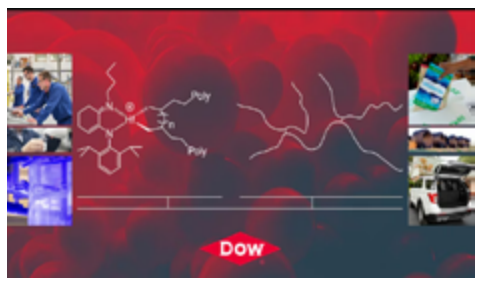
MIDLAND, Michigan – March 15, 2024 – Research scientists from Dow (NYSE: DOW) have developed a novel architecture for polyethylene (PE). This differentiated long-chain branched PE offers asset flexibility and the potential for reduced carbon emissions in industry scale polyethylene production. Science recently published a technical paper on this discovery(opens in a new tab).

"Dow has a bold vision to create the materials and solutions that contribute to addressing global challenges such as climate change, resource scarcity, and plastic waste while meeting evolving customer needs," said Stephanie Kalil, Senior Global Business Director, Packaging & Specialty Plastics. "This is a game-changing innovation by Dow's research & development team that will further strengthen Dow's industry-leading product portfolio."

Low density polyethylene (LDPE) was the first plastic developed 90 years ago, and remains the primary material used to incorporate the long-chain branched PE necessary to aid in polymer processing. The development of novel polymer microstructures is of ongoing interest due to the potential for differentiated properties.

Research scientists accomplished this with a unique mechanism where the catalyst has two growing polymer chains on the same metal and a diene couples the chains together in a concerted manner (ladder process). The kinetics of the mechanism allows for favorable operation and the novel PE formed has good processing properties.

The ability to produce long-chain branched PE in different reactor configurations provides greater asset flexibility and the potential for a reduced carbon footprint in industry scale polyethylene production. In addition, the multi-purpose PE could allow downgauging of end use applications, such as packaging, therefore enabling a reduction in material usage and waste avoidance.



"The ladder technology is an example of the unique catalysis and mechanisms that help unlock novel microstructures and differentiated properties," said Dave Parrillo, Vice President of Research & Development (R&D), Packaging & Specialty Plastics and Hydrocarbons. "This breakthrough will allow Dow to expand the polyethylene design space to create lower carbon emissions, circular, and safer products for packaging, infrastructure, consumer, transportation, and health and hygiene applications."

This research was led by Robert Froese, Research Scientist, and a team of researchers from Midland, Michigan, Lake Jackson, Texas, and Terneuzen, The Netherlands. This technology showcases Dow's drive for innovation to achieve our sustainability goals.

Read the full report : https://www.eurekalert.org/press/scipak/(opens in a new tab).

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Electroplating More Than Just A Shine

Introduction

In the clandestine realm of industrial alchemy, lies a subject both ancient and modern - The Electroplating process. In its shimmering depths, lie the secrets of transforming base metals into objects of allure and utility. Electroplating holds its sway over industries vast and varied, from automotive to aerospace, from jewelry to electronics. Though Electroplating techniques may seem simple, mastery over this process is not merely a goal but a necessity. In this short article, we endeavor to present a comprehensive view of the subject of Electroplating.

Electroplating Process

Electroplating is a process used to coat a metal object with a thin layer (usually in microns) of another metal. Typically using electrolysis, in an electrolytic cell, is exemplified in the diagram above. It illustrates an iron piece that is to be coated with copper. The solution or electrolyte utilized should be a salt of the metal intended for coating. An electric current is passed through the solution with the help of an external DC source. The copper ions from the Copper salt solution are deposited onto the iron piece. The copper electrode (anode) dissolves in the electrolyte to replenish the copper deposited. As the process advances the size of the copper electrode on the left diminishes. Beyond this method, there exist alternative Electroplating techniques for coating purposes.

Types of Electroplating Metals

The benefits of Electroplating can vary widely, from enhancing the appearance of an object to protecting against corrosion or improving conductivity. Thus the metals used in electroplating can vary depending upon the specific application. Given below is a list of metals commonly used in electroplating :

Nickel - Widely chosen for corrosion protection, decorative purposes, etc. It is very popular as it provides a durable and lustrous finish.

Copper - Used to enhance conductivity. Gives a bright and attractive finish.

Chromium - Primarily employed for decorative purposes, offering a shiny and durable coating. Commonly applied to automotive parts, bathroom fixtures, kitchenware, etc.

Zinc - Plating with zinc is often referred to as galvanizing. Used for corrosion protection, it forms a layer on steel or iron substrates, thus preventing them from rusting. Finds application in corrugated roofing sheets.

Gold - Valued for its decorative appeal and corrosion resistance, frequently used in jewelry, electronics, and decorative items where a luxurious finish is desired.

Silver - Employed for enhancing electrical conductivity, decorative purposes, and as an anti-tarnish coating. Commonly used in jewelry, tableware, and electrical contacts.

One application that is being widely used today is in the automotive sector, where chromium deposition is done on a base material of plastic (ABS). It is employed in the front cooling grills and dashboard parts.

The electroplating process encompasses degreasing to remove dirt, followed by surface polishing, plating, and post-plating treatment before final testing. In India the recommended electroplating practice adheres to Indian Standards IS 3655 (1985) with additional standards such as IS 1573(1986) specifying electroplated coatings of zinc on iron and steel.

Manufacturers may require electroplating to impart specific properties like better wear and abrasion resistance, greater lubricity and lower friction, EMI/ RFI (Electromagnetic Interference/ Radio frequency interference) protection for electronic circuits, temperature, and impact resistance, improved solderability, reduced porosity, added surface hardness etc. All these special features can be achieved with advanced electroplating methods.

Environmental Pollution

Environmental pollution is a significant concern associated with the electroplating industry. The process discharges solid wastes, and heavy metals through air emissions and effluents. Its adverse impact on health and the environment are key concerns for both the manufacturers and end users. For instance, cyanide, cadmium, and lead plating are

Continued on Pg 45

SABIC'S NEW LNP™ ELCRES™ SLX RESIN ELEVATES AESTHETICS, DURABILITY OF PAINT-FREE EXTERIORS

SABIC, a global leader in the chemical industry, today introduced LNP™ ELCRES™ SLX1271SR resin, a new addition to its weatherable LNP SLX copolymer portfolio. This specialty material features enhanced scratch and mar resistance and a high-gloss surface finish to provide the automotive industry with a new molded-in color solution for exterior components. LNP ELCRES SLX1271SR resin also delivers exceptional weatherability, continuous UV stability and good mechanical performance. By adopting this new solution, customers can leverage the environmental and potential system cost advantages of paint elimination while maintaining the attractive appearance of exterior parts over time.

This novel resin is a 2024 Edison Best New Product Awards finalist in the Advanced Materials category. The Edison Awards honor global innovation excellence.

"Our latest technological breakthrough increases the appeal of paint-free thermoplastics by resolving the downsides of traditional materials, such as scratch resistance issues," said Jenny Wang, Director, Formulation & Application, APAC, Specialties, SABIC. "Innovations such as our intrinsic UV absorption layer help this new resin maintain its gloss and mechanical performance over the life of the vehicle. New LNP ELCRES SLX1271SR resin demonstrates our technical team's ability to develop creative solutions to our customers' toughest challenges."

Reducing VOCs in Automotive Manufacturing

Studies have shown that, considering a typical vehicle's life cycle, the vast majority (95 percent) of volatile organic compounds (VOCs) are emitted during the painting process. Although the automotive industry is turning to solutions with lower environmental impact, such as waterborne paints, many of these products still emit some VOCs. Therefore, many manufacturers rely on thermoplastics with molded-in color to avoid VOC emissions and costly secondary operations. However, some of these materials have difficulty maintaining their original aesthetics, such as color depth and gloss, when exposed to abrasion, impact, harsh weather and UV light.

Paint-free LNP ELCRES SLX1271SR resin offers a new solution for reducing VOC emissions in automotive exterior components, while delivering excellent aesthetics comparable to those of incumbent solutions such as painted polycarbonate (PC) and painted PC/acrylonitrile-butadiene-styrene (PC/ABS) resins. For instance, in terms of scratch resistance and gloss retention, this new product showed similar performance to painted polymer substrates in the wet scrub (car wash) test. Further, the SABIC material can maintain its desirable aesthetics better than other paint-free thermoplastics – for up to 10 years or more. One reason is that the resin forms a self-protecting layer that absorbs UV light on a continuous basis to help retain color and gloss.

"We continue to evolve our LNP portfolio with new solutions that can extend the useful life of end applications," said Maureen MacDonald-Stein, Director, Portfolio Strategy & Marketing, Specialties, SABIC. "Customers increasingly favor thermoplastics with molded-in color to avoid coating operations that release volatiles into the atmosphere. Understandably, they do not want to compromise on durability or aesthetics. Our new paint-free LNP SLX resin supports VOC reduction while meeting all key requirements for a beautiful, long-lasting and resilient finish."

Raising the Bar on Paint-free Thermoplastics

LNP ELCRES SLX1271SR resin is formulated to deliver vivid, molded-in colors, such as piano black, and a high-gloss surface finish. SABIC conducted a comparison of this new product and competitive materials: a toughened PMMA grade and a blend of PMMA and acrylonitrile styrene acrylate (ASA). The results showed that LNP SLX1271SR resin provides better mechanical performance as well as improved gloss, color depth and heat resistance (~ 120^{0}C)

compared to acrylic-based resins like PMMA or PMMA/ASA (heat resistance ~80^{0}C).

This new scratch-resistant grade extends SABIC's weatherable portfolio, which provides a wide range of high-gloss, opaque colors as well as clear or tinted transparent colors. In addition to automotive exterior parts such as spoilers, grilles and mirror housings, it is well suited for computer electronics housings and outdoor infrastructure components like solar panels.

Source : Sabic

DOW INTRODUCES NEW POLYOLEFIN ELASTOMER-BASED LEATHER ALTERNATIVE FOR THE AUTOMOTIVE MARKET

- First to commercialize for the global automotive seating market
- Expansion of application beyond automotive into other consumer and lifestyle segments anticipated

Shanghai, China – March 26, 2024 – Dow (NYSE: DOW) has formulated a breakthrough option of polyolefin elastomers (POE) based artificial leather - a solution to address the automotive industry's need to shift towards increasingly animal-free product alternatives to leather.

The POE alternative leather option has been commercialized by HIUV Materials Technology, a China-based partner and qualified by an electric car manufacturer in their auto seatings application.

Key benefits of Dow's POE leather option include:

- An ultra-soft tactility with better color stability, empowering designers with more flexibility on the choice of color, especially light colors.
- Good aging and low temperature resistance, meeting the strict requirements of the automotive industry.
- Elimination of hazardous chemicals, plasticizers, and heavy-metals materials.
- Low volatile organic compounds (VOC) and odor.
- 25% to 40% lighter weight than PVC leather due to lower density.

"With Dow's long-standing expertise in materials science, we are thrilled to bring this high-performance animal-free leather option to market." said Bambang Candra, Asia Pacific commercial vice president of Dow Packaging and Specialty Plastics. "We look forward to more value-chain collaborations with forward-looking brands to discover new possibilities for our POE leather option in the automotive market and beyond."

Beyond automotive, this innovative option can be applied in other applications including sporting goods, furniture, and fashion and accessories, fulfilling brand owners' requirements for a new option that meets the stringent demand for product appearance and customer experience with cost-effective positioning.

Source : DOW

FRICTIONLESS FINESSE LUBRICANTS IN ACTION

Introduction

In the world of industry, where gears grind, engines roar, and pistons churn relentlessly, there exists an often-overlooked facilitator: Lubricants. These unassuming fluids, made from human ingenuity, serve as the lifeblood of machinery, ensuring the seamless operation of our modern mechanical marvels. From the towering cranes of construction sites to the sleek engines of supersonic jets, lubricants play a significant role. They reduce friction, dissipate heat, and prolong the lifespan of the equipment they serve. The earliest known use of lubricants dates back to the Mesopotamian civilization. Chariot wheels, hubs, and other moving parts were lubricated with animal fats and plant oils. In this article, we will discuss details of widely used lubricants including Industrial lubricants and Automotive lubricants.

Classification

A very broad classification would be mineral lubricants derived from crude oil through a refining process, Synthetic lubricants that are chemically engineered to get a precise molecular structure and properties, and bio-lubricants obtained from resources such as animal fats, vegetable oils, etc. A crucial parameter that applies to all lubricants is viscosity, referring to thickness or flow resistance. Grades of viscosity like SAE (Society of Automotive Engineers) or ISO (International Standards Organization) are utilized to define them. Some popular grades are SAE 10W - 30, SAE 10W -40, ISO VG32 , ISO VG46, etc. Another classification method would be application-wise, which could be more relevant. Below you will find succinct descriptions for a portion of these:

Automotive lubricants - Forms the bulk of usage. Derived mainly from refining crude oil, they lubricate and protect engines and other moving parts of vehicles. They assist in cooling and cleaning internal components.

Industrial lubricants - Essential for the smooth operation of machinery in various manufacturing and industrial processes. They reduce friction between moving parts and prevent wear and tear under harsh operating conditions of high temperatures and heavy mechanical loads.

Marine lubricants - Utilized in equipment on ships, large boats, and offshore platforms. They are formulated to withstand environments like high humidity, saltwater exposure, and heavy loads.

Aviation lubricants - Engineered to withstand the extreme conditions of altitude, temperature, and speed. Used in aircraft engines and hydraulic equipment like landing gears. These lubricants undergo rigorous testing and certification by Aviation authorities.

Specialty lubricants - Formulated with advanced additives and base oils, they meet very specific requirements. Examples include food-grade lubricants used in beverage and food processing equipment, and pharmaceutical-grade used in pharmaceutical processing machinery.

Manufacturing process

The typical manufacturing process consists of blending base oils with additives, a complex procedure. The first step is selecting base oils, which could be mineral oils derived from crude or synthetic oil produced through chemical synthesis or a combination of both. Parameters like viscosity, temperature, and application etc determine the selection. Next, the base oils are blended with Lubricant additives, like viscosity index enhancers, anti-wear agents to reduce friction and wear, antioxidants to prevent oxidation, etc. The entire mixture is then mixed to achieve a uniform distribution of the base oils and additives. Quality checks are conducted at various stages to meet the requirements of Lubricant Properties like viscosity, chemical composition, and the performance characteristics of the blend. Thereafter the finished product is packaged into bottles, drums, or bulk tankers as required and shipped to customers.

Oil Lubrication Systems

Typical Oil Lubrication System - Courtesy : SKF 1. Pump with Motors 2. Oil Filters 3. Heat Exchanger 4. Bearings of various Machinery. 5. Electrical Control Panel . 6 Oil Tank

Most of us are familiar with the use of lubricants in automobiles. However, there is a lot of it used in industry. A typical example is illustrated in the figure above. Here, a centralized lubrication system is used to supply the oil to various bearings of machinery. It not only supplies the lubrication but also takes away the heat that is generated. Two motor-driven pumps (1 running and one standby) draw oil from the tank. It is then pumped through oil filters to remove dirt and tiny metal particles. The hot oil is subsequently cooled through a water-to-oil heat exchanger. Cooled and filtered oil is then taken through a main pipe and fed to distributors, which in turn supply it to individual bearings. The hot oil is collected and then returned to the tank. An electrical control panel facilitates the operation of the motors and also displays important parameters like oil pressure and flow, and signals like filter chocked, low pressure, low flow, high temperature, etc, conveying this information to a centralized digital control system.

Lubricants Market

The figure above illustrates the distribution of lubricants market consumption sector-wise in India for the year 2020. The Indian economy is projected to grow at a CAGR of 6.9%. It is expected the quantity of lubricants will also grow to meet this demand, although proportions are likely to remain the same. However, some decrease in the automobile sector is anticipated in the long run as EVs (Electric vehicles) become more prevalent.

Conclusion

From the chariots of Mesopotamia to the sleek spacecraft of the 21st Century, lubricants have stood testament to human ingenuity and perseverance. They have adapted and evolved to meet the ever-growing demands of technology and industry. Yet amidst the ceaseless march of progress, one thing remains constant: the vital role of lubricants in ensuring the smooth functioning of our mechanical world.

Source : Chemical Market Team

SHANGHAI, April 2, 2024 /PRNewswire/ -- On March 28, 2024, the much-anticipated "LubTop2023 China Lubricant Industry Annual Overall Evaluation List and Automobile Service Competitiveness Selection" (hereinafter referred to as the LubTop2023 Overall Evaluation List) was grandly unveiled and globally broadcast live from the Sheraton Shanghai Pudong Hotel.

Themed "New Quality, New Momentum," the LubTop2023 Overall Evaluation List was initiated and organized by China Lubricants Information Network (sinolub.com) and Lubricant Market, with support from mainstream industry institutions and numerous media partners. Dignitaries from various fields such as Shi Jianhua, Deputy Secretary-General of the China Electric Vehicle Hundred People's Association and former Deputy Secretary-General of the China Association of Automobile Manufacturers, Chen Guoxu, former professor of the Military Oil Application and Management Engineering Department of the Logistics Engineering College, and Gu Laifeng, Vice Director of the Center for Smart Energy Innovation at Shanghai Jiaotong University and former Vice Dean of the School of Overseas Education at Shanghai Jiaotong University, along with industry leaders, expert figures, Fortune Global 500 brands, listed companies, CEOs of well-known enterprises, GMs, leaders of LubTop award-winning companies, and numerous guests from the lubricant and automotive aftermarket industry chains at home and abroad attended the event.

Simultaneously, the ApexTire2023 China Tire Annual Excellence Awards list was released, accompanied by the "2024 New Quality Productivity and New Energy Vehicle Service Summit Forum," offering a splendid intellectual feast and guiding industry professionals to engage in deeper reflections on the industry, actively promoting its healthy development. Guests at the event, mainstream media in the industry, as well as millions of car owners watching via live broadcast, collectively witnessed the birth of the glory of the lubricant and automotive service industry kings Mr. Shi Jianhua, Vice Secretary-General of the China Electric Vehicle Hundred People's Association, former Deputy Secretary-General of the China Association of Automobile Manufacturers, and Chairman of the Automotive Aftermarket Committee, delivers his speech.

This highlights the direction of industry development under the leadership of new quality productivity.

China is the world's largest automotive production and sales country, leading globally in terms of car ownership, production and sales of new energy vehicles, and export volumes. It also boasts the world's largest lubricant market and the highest production and sales volumes of tires. Which lubricant brand is the strongest? Which tire brand is the best? The annual "LubTop Overall Evaluation List" and "ApexTire Tire Annual Excellence Awards," widely regarded as the "industry Oscars," attract global attention each year.

The "LubTop Overall Evaluation List" selection event is held annually and is now in its eleventh edition. Its aim is to "establish industry benchmarks and inspire the future of the industry." By summarizing the achievements of the lubricant industry and automotive aftermarket in terms of brands, technology, and products over the past year, it records the footsteps of industrial technological and business model innovations. It explores the direction of lubricant product and technological advancements, allowing channel terminals and consumers to have a more objective understanding of the industry's brand development status. This provides a scientific basis for consumer decision-making.

According to the organizing committee, the "LubTop2023 Overall Evaluation List" selection event adopts a brand core evaluation system based on five dimensions: innovation-driven, market win-win, user experience, industry leadership, and green development. Enterprises qualify for application through initial selection, and based on the results of third-party authoritative quality inspections. The selection process involves a combination of popular voting among car owners and channels, influential market research, and media observation and evaluation. The expert mentor team adheres to high standards and bottom-line thinking, evaluating rigorously with a global perspective and professional spirit. The online and offline big data combined with intelligent algorithms generate the LubTop Brand Honor Index, selecting industry benchmarks such as the "Top Ten Lubricant Brands."

Industry experts believe that the five dimensions of the evaluation criteria for the LubTop2023 Overall Evaluation List interpret the essence of industrial brands under the leadership of new quality productivity. It emphasizes forging a high-quality development engine through technological innovation and highlights green development as the foundation of high-quality development. This reflects the direction of the lubricant industry in the context of China's modernization, which places greater emphasis on the quality, balance, safety, and sustainability of economic development. As a nationwide selection event with significant scale and influence in the lubricant and automotive aftermarket industry, the LubTop Overall Evaluation List is considered one of the benchmark activities in the automotive aftermarket and equipment management fields. Widely regarded in the industry as the "Annual Oscars" of the lubricant and automotive aftermarket industry, it is led by international giants and involves the participation of well-known Chinese independent brands, achieving cross-industry integration. It serves as a brand endorsement for quality and industry status, and is an important guide for consumers and users alike.

Source : inolub.com

LILYSILK AND NBCF PARTNER TO LAUNCH CARING COLLECTION, ELEVATING BREAST CANCER SUPPORT AND AWARENESS

NEW YORK, March 25, 2024 / PRNewswire/ -- LILYSILK, the world's leading silk brand with a mission to inspire people to live spectacular, sustainable lives, is proud to announce the continuation and strengthening of its partnership with the National Breast Cancer Foundation, Inc.® (NBCF) to introduce the LILYSILK X NBCF Caring Collection

In its third year of partnership, LILYSILK reaffirms its commitment to the NBCF mission of 'Helping Women Now®' by dedicating a portion of its proceeds to the cause. From March 1, 2024, to June 30, 2025, LILYSILK pledges to contribute 50% of the gross retail sales from the LILYSILK X NBCF Caring Collection to NBCF, to help support those affected by breast cancer through early detection, education, and support services.

The Caring Collection features exquisite silk items designed to offer solace and support in everyday life. Each product from this line – Hope's Comfort Pillowcase, Eternal Hope Scrunchie, Hopeful Dreams Sleep Eye Mask, and The Hope's Embrace Sleep Set – is a testament to LILYSILK's commitment to quality, comfort, and community care. The collection serves as a symbol of strength, unity, and hope so no one faces breast cancer alone.

The Caring Collection is thoughtfully packaged to reflect the heartfelt gratitude and shared commitment of LILYSILK. The Hope's Embrace Sleep Set comes in a specially designed gift box bearing a message of thanks and solidarity, while individual items are thoughtfully presented in LILYSILK's signature packaging, accentuated with a Pink Ribbon-themed sealing sticker, symbolizing the continuous fight against breast cancer.

"Our ongoing partnership with NBCF is a cornerstone of LILYSILK's mission to make a tangible difference in the community," said David Wang, CEO of LILYSILK. "The Caring Collection transcends mere symbolism. It's a tangible pillar of support to those battling breast cancer. We take immense pride in standing with NBCF in this meaningful endeavor."

"We are excited to continue our partnership with LILYSILK and their commitment to NBCF's mission", said Candice Hensley, NBCF Sr. Manager of Strategic Partnerships. "Last year LILYSILK donated over $43,000 of eye masks to our HOPE Kits that are given to women undergoing breast cancer treatment. With their generosity and continued support, they will help us to provide breast health services to women. We are proud to have them as a partner as an extension of our hearts and hands."

Source Lilysilk

CELANESE AND SECARNA PHARMACEUTICALS ENTER INTO RNA RESEARCH COLLABORATION FOR LONG-ACTING ANTISENSE THERAPIES

Wed, March 20 2024 DALLAS & MARTINSRIED, Germany--(BUSINESS WIRE)-- Celanese Corporation (NYSE: CE), a global specialty materials and chemical company, and Secarna Pharmaceuticals GmbH & Co. KG, a leading independent European antisense drug discovery and development company, today announced a research collaboration for the development of long-acting implants that deliver antisense oligonucleotides (ASOs).

ASOs are synthetic molecules designed to target specific messenger RNA to prevent the production of proteins implicated in the progression of a wide range of diseases including cardiometabolic, central nervous system, oncological and rare diseases. Antisense therapy is an innovative, commercially-validated therapeutic approach, but often requires frequent administration or the delivery of large doses to achieve uptake at the intended site of action, ultimately causing a high treatment burden for patients.

The Celanese VitalDose® Drug Delivery Platform and Secarna's proprietary ASO Drug Discovery and Development Platform will be used to develop ASO-eluting implants, which have the potential to lessen the dosing frequency, minimize off-target immune responses and improve targeting to provide better patient

outcomes for a range of indications. The VitalDose® Drug Delivery Platform provides reliable, controlled-release performance and has a long history of use in approved parenteral drug products in the United States and Europe. It can be tuned to deliver months to years of drug release and has demonstrated, stable ASO release over one year.

"Collaborating with Secarna allows us to develop an innovative implant that has the potential to significantly change the way disease-modifying ASO therapies are administered," said Cyonna Holmes, global business strategy leader for Ophthalmology and RNA at Celanese. "Our team is excited to use our unique Drug Delivery Platform and expertise to help address the growing need for patient-centric, targeted solutions for ASO therapies alongside Secarna."

Secarna's proprietary ASO Drug Development and Discovery Platform enables the company to discover novel therapies for targets that are difficult to reach therapeutically with conventional approaches. With several high value and innovative programs, Secarna has validated its platform in various indications such as cardiometabolic, immune-oncology, fibrotic/inflammatory diseases and the central nervous system.

"We are looking forward to partnering with Celanese to combine our industry-leading ASO platform with their VitalDose® drug delivery technology," said Konstantin Petropoulos, CBO of Secarna Pharmaceuticals. "Together we see the potential to enhance the way our targeted ASO therapies are delivered which ultimately serves our shared goal: to make highly specific, potent, safe and convenient therapeutic options available for patients who urgently need them."

Scientists at the Celanese Development & Feasibility Lab will independently conduct portions of the planned research in a dedicated pharmaceutical facility.

Source : Celanese

ASAHI KASEI MEDICAL AND AW TECHNOLOGIES ENTER EXCLUSIVE DISTRIBUTION AGREEMENT FOR TRACHFLUSH IN JAPAN

Düsseldorf and New York – April 3, 2024 – AW Technologies and Asahi Kasei Medical, a core operating company of the Japanese technology company Asahi Kasei, have entered into an exclusive distribution agreement in Japan for AW Technologies' TrachFlush™ device. AW Technologies is currently in the process of medical device registration of the TrachFlush in Japan, with market launch targeted in fiscal 2024.

Developed by AW Technologies based on an invention by an intensivist, the TrachFlush is a medical device to reduce the discomfort of ventilated patients while lightening the workload on healthcare professionals during tracheal suctioning. The TrachFlush supports airway secretion (phlegm) management with a unique cuff pressure control system. With the push of a button, the TrachFlush deflates the cuff and utilizes the ventilator air pressure during an inspiratory cycle and re-inflates the cuff before the cycle completes.

TrachFlush has received the CE Mark in Europe in 2020 and FDA clearance in the United States in 2023. In Japan, marketing and sale is to be performed by Asahi Kasei Medical.

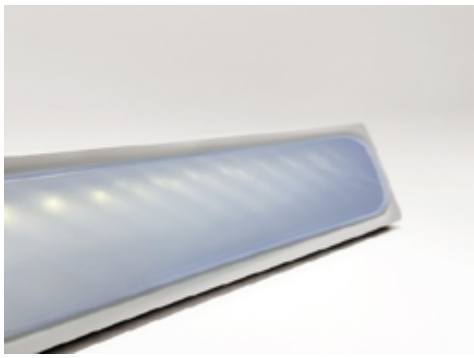
Ken Shinomiya, President of Asahi Kasei Medical, stated, "We are delighted to add the TrachFlush to our product lineup in the intensive care field, where we have strength in the area of blood purification. By leveraging our experience and know-how in blood purification, we believe that this will deliver diverse value, such as enhancing patients' QOL and reducing the burden on healthcare workers."

Adam Hansen, CEO of AW Technologies, commented, "We are very pleased and excited to announce our partnership with Asahi Kasei Medical. This partnership is very important for AW Technologies, and Asahi Kasei Medical will play a very important role in our expansion of TrachFlush globally. We believe the TrachFlush will have a great impact in the ICU – not only by preventing ventilator-associated pneumonia, but also by non-invasively preventing the accumulation of secretion in the airways."

Source : Asahi Kasei

LOTTE CHEMICAL, DEVELOPED A TRANSLUCENT PP COMPOUNDS SOLUTION AS AN INNOVATIVE MATERIAL FOR AUTOMOBILE DESIGN

LOTTE Chemical has developed an innovative translucent PP compounds solution that would change the automotive design paradigm. The developed product has high light transmittance and low haze characteristics that could not be achieved with conventional PP compounds products, and is expected to provide smart integrated design solutions in the automobile industry moving toward EV and autonomous driving.



In particular, it presents new possibilities in terms of exterior system design of bumpers and grills. Translucent solutions would provide aesthetic visual effects by implementing hidden lighting and sensors. Additionally, the integrated design structure that eliminates component boundaries would reduce air resistance, enabling carbon reduction with its improved fuel efficiency.

The exterior panel implemented with this translucent PP compounds solution can be used as a canvas for communication that enhances autonomous driving functions, giving it the role of a diverse communication panel among drivers and between the driver and the external environment.

The compounding technology has been used to supplement rigidity and durability, which are lacking in durability, and can be structurally supplemented in component design. Since it is difficult to apply PC materials that can implement transmission performance to bumpers due to pedestrian collision safety, the use of translucent PP is expected to be increased.

LOTTE Chemical said, "Through this developed product, automobile manufactures will be able to see further differentiated possibilities in terms of vehicle design and functionality, and we plan to expand translucent differentiated solutions to the materials for interior trim as well as automobile exterior panels."

Source : Lotte Chemical

JOHNSON MATTHEY AND BP TECHNOLOGY CHOSEN FOR THE WORLD'S LARGEST FISCHER TROPSCH SAF PRODUCTION PLANT

DG Fuels has chosen Johnson Matthey and bp's co-developed Fischer Tropsch (FT) CANS™ technology for its first sustainable aviation fuel (SAF) plant.

Located in Louisiana, USA, it would be the largest announced FT SAF production facility in the world, with a planned capacity of 13,000 barrels per day – capable, after blending to 50%, of producing enough SAF for more than 30,000 transatlantic flights annually.

DG Fuels has already secured offtake agreements with Delta Air Lines and Air France-KLM, and has a strategic partnership with Airbus to scale up the use of SAF globally.

Signed at the end of March, this is the tenth sustainable technologies project win in Catalyst Technologies since April 2022, delivering on our strategic milestone for large scale project wins.

LONDON, April 10, 2024 /PRNewswire/ -- Johnson Matthey (JM), a global leader in sustainable technologies, today announced that DG Fuels has selected its award-winning Fischer Tropsch (FT) CANS™ technology – co-developed with bp – for DG Fuels' first sustainable aviation fuel (SAF) plant in St. James Parish, Louisiana. The plant would be the largest deployment of FT CANS to date, seven times larger than any previously announced project using this technology.

DG Fuels is an emerging leader in renewable hydrogen and biogenic based, synthetic SAF and diesel fuel. The proposed $4 billion DG Fuels plant is planned to produce 600,000 metric tons (MT) of SAF per year when fully operational and would be the largest announced SAF production plant using a non-HEFA[1] route. DG Fuels is planning 10 more SAF production plants

across the United States. These would be modelled on the Louisiana plant with JM and bp as the partners of choice for these facilities.

The fuel at the Louisiana plant is expected to be produced from waste biomass. DG Fuels is projected to purchase around $120 million of sugar cane waste annually, a third of which is planned to be purchased from St. James Parish farmers. JM and bp's FT CANS technology converts the synthesis gas derived from this biomass to synthetic crude, which is then further processed to produce the synthetic kerosene that is then blended with conventional jet fuel to produce SAF.

Current international certification for this SAF requires a blend of up to 50% with fossil kerosene to create "drop-in SAF". Based on a typical widebody aircraft fuel consumption rate travelling the distance from London to New York, the plant's planned SAF production capacity, after blending, is equivalent to the fuel required for over 30,000 transatlantic flights annually, equivalent to more than 3% of annual traffic flying on that route currently.

The plant is expected to start production by 2028. DG Fuels has already secured offtake agreements with major airlines, including multi-year deals with both Air France-KLM and Delta Air Lines. DG Fuels also has a strategic partnership with Airbus to help make SAF available at scale around the world.

Maurits van Tol, Chief Executive for Catalyst Technologies at Johnson Matthey, said: "The size of this project is truly exciting and would help take the industry closer to wide-scale use of SAF. DG Fuels has ambitious plans and the fact it has secured agreements with major airlines demonstrates there is appetite in the market. Our FT CANS technology enables cost-effective deployment across a wide range of project sizes. We look forward to working with DG Fuels as a long-term partner for SAF production."

Noemie Turner, VP Technology Development & Commercialisation at bp, said: "The aviation industry is looking to greatly increase its use of SAF, and we're proud that DG Fuels has selected our technology to be at the heart of their ambitious plans for large scale SAF production. Our FT CANS technology solution brings together decades of science and engineering expertise from bp and JM, and this project shows its competitiveness across the range of production scales and feedstock sources the industry needs. We're excited to see the relationship with DG Fuels grow, and we look forward to seeing this project come to fruition."

Christopher J. Chaput, President of DG Fuels, said: "We are extremely excited to be moving forward with Johnson Matthey to execute our unique strategy of high carbon conversion. With this technology, we will create a product that is responsibly made and can be immediately substituted for conventional aviation fuel with no engine adaptations. This partnership is a significant boost to help the aviation industry reach its climate goals."

Michael Darcy, CEO of DG Fuels, said: "Using Johnson Matthey and bp's co-developed Fischer Tropsch (FT) CANS™ technology allows DG Fuels to scale SAF at high volume production and competitive prices for the first time ever. This innovation will take DG Fuels' SAF from the sugar cane fields of Louisiana to cleaner skies all across the world."

Source : Johnson Matthey

TORAY TO OPERATE SEWAGE REUSE DEMONSTRATION PLANT EMPLOYING MEMBRANES THAT COULD HELP ALLEVIATE SEVERE WATER SHORTAGES IN INDIA

Tokyo, Japan, March 28, 2024 – Toray Industries, Inc., announced today that it will start demonstrating a sewage reuse system employing its water treatment membranes in Chennai, India.

The nation's swift urbanization has caused water demand to surge, particularly in large cities. Another challenge is that drought has beset around half of India (see note 1). Toray estimates a water supply shortfall of 30% to 40%. Transporting water from other regions is expensive. The authorities properly treat only around 30% of sewage (note 2), discharging most of it directly into rivers and other bodies of water, exacerbating water pollution.

It is against that backdrop that in April 2021 the Japan International Cooperation Agency chose a Toray proposal to demonstrate and commercialize energy-saving sewage reuse systems in India that purify water with water-treatment membranes. The selection was for that agency's SDGs Business Verification

Survey with the Private Sector for Energy Saving Membrane System for Sewage Reclamation in India" (note 3). August 2022 saw the company open the Toray India Water Research Center (note 4) at the Indian Institute of Technology Madras Research Park. That institute is a hub for collaboration between academia and industry. The center conducts joint research with the institute into using water-treatment membranes for sewage reuse technologies. It also embarked on building a sewage reuse demonstration plant that recently became operational.

The diagram below shows that Toray's system uses two approaches to treat sewage. The first combines biological treatment with ultrafiltration and reverse osmosis membranes. The second brings together membrane bioreactor and reverse osmosis membranes. Water filtered by ultrafiltration membranes and membrane bioreactor is scarce of organic matter, particles, and microorganisms in sewage, and can be discharged into lakes and other bodies of water for indirect reuse as drinking water. Reverse osmosis membranes can also remove salts, heavy metals, arsenic, fluorine, and other contaminants to further enhanced reclaimed water.

In recent years, Toray has developed and launched a range of energy-saving products employing reverse osmosis and ultrafiltration membranes and membrane bioreactor modules. It has engineered these offerings to consume 30% less power than conventional Toray-made counterparts. The company estimates that electricity rates have doubled in India over the past decade, making its energy-efficient system even more attractive in that market.

The authorities in Chennai and Mumbai plan to reuse sewage with membranes from 2027 onwards. By demonstrating and promoting its system, Toray will contribute to greater sewage reuse in major Indian cities and help the nation address severe water shortages.

Providing access to clean water is pivotal to The Toray Group Sustainability Vision, representing a roadmap to the World as Envisioned by Toray Group in 2050 and embodying Toray Vision 2030, through which the Group seeks to achieve sound, sustainable growth. In keeping with its commitment to innovating ideas, technologies, and products that deliver new value, Toray will help resolve the world's water problems and materialize a circular economy by developing water treatment membrane systems.

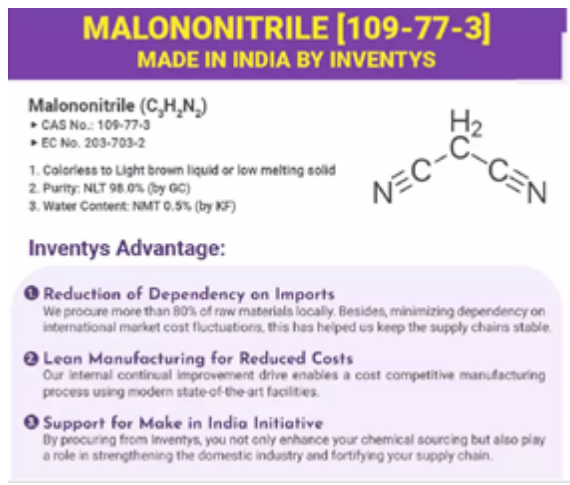
Source : Toray

NEW PRODUCTS

INNOVATION UNLEASHED INVENTYS JOURNEY TO PROMINENCE

In India's Chemical Industry, Inventys stands out as a prime example of the successful integration of innovation and expansion. Located near Nagpur, Maharashtra, its integrated complex exemplifies this synergy. Specializing in the production of Malonitrile, a chemical renowned for its distinctive structure and versatile properties, Inventys has established itself as a leader in the field.

Malonitrile, identified by its CAS number 109-77-3 and molecular formula C3H2N2, exists as a colorless liquid at room temperature. Its unique molecular architecture and properties make it a valuable ingredient in various industries. It serves as a crucial pharmaceutical intermediate, contributing to the formulation of antiviral, antibacterial, and anticancer drugs. Additionally, derivatives of Malonitrile play integral roles in the production of organic solar cells, electronic devices, and sensors. Furthermore, its ability to disrupt key metabolic pathways in target organisms makes it a favored component in the manufacturing of pesticides and herbicides.



Established in 2005, Inventys has rapidly expanded, boasting strong capabilities

in manufacturing, research and development, and engineering. The company has been honored with several awards and holds certifications such as ISO 9001, ISO 14001, and OHSAS 18001, underscoring its commitment to quality and safety.

The company's stringent operating standards have facilitated efficient and safe operations despite the handling of hazardous chemicals within its chemical processes.

Given the anticipated 7% CAGR growth of India's economy, Inventys is poised for a promising future, anticipating increased demand for its products both domestically and internationally.

Source : Team Chemical Market

COTEC™ GMBH AND CADIS ENGINEERING GMBH JOINTLY DEVELOP HYDROPHOBIC COATING PRINTER FOR AUTO DISPLAYS

Mitsui Chemicals, Inc. (Tokyo: 4183; President & CEO: HASHIMOTO Osamu) announced that COTEC™ GmbH (Managing Director: Alexander BRAND), a German subsidiary of U.S.-based group company SDC Technologies, Inc. (President & CEO: Richard CHANG), have developed a digital printer for innovative hydrophobic-coated automotive displays in partnership with fellow German company CADIS Engineering GmbH (CEOs: Rainer KöTZER / Markus GERSDORFF).

Used in ophthalmic lenses, among others, COTEC's ultra hydrophobic coatings not only offer outstanding water repellency, but also helps to keep the clear views and easy-to-clean, as fingerprints, sebum and dirt can easily be wiped off the coated surface. The new printer combines COTEC's ultra hydrophobic coating technology with CADIS's digital printing machine expertise. The result is a groundbreaking technology that allows continuous production of hydrophobic coatings for automotive displays in a normal pressure environment, as opposed to the current method based on batch production using a vacuum evaporator.

Printer features

1. Improving the productivity of automotive displays

   This printer enables a speedy coating and an easy integration in existing production.

2. Enhancing the flexibility in the interior design

   This printer enables a highly precise coating on large or complex displays based on our Inkjet technology.

3. Reduces environmental impacts in manufacturing processes

Printing under normal-pressure minimizes Energy consumption. Further, thanks to technology that ensures waste-free high-precision control of the coating area, the printer not only achieves cost reductions, but also delivers an eco-friendly process. Improvements here include reducing material consumption and eliminating the cleaning and polishing processes. With demonstrations at a leading European automaker supplier completed in the third quarter of 2023, the plan going forward is to speed up initiatives aimed at the printer's full-scale adoption.

As a leading manufacturer of ophthalmic lens materials, Mitsui Chemicals provides lens manufacturers worldwide with a variety of refractive indices and properties, including the MR™ series high-refractive index lens materials. Mitsui Chemicals has intensified its position in the field of coating materials essential for ophthalmic lens, following several key acquisitions including SDC Technologies in 2008, and SDC's acquisitions including FSI Coating Technologies permanent anti-fogging coating materials; acquired to the group in 2010; UV-curable hard coatings material producer, LTI Coating Technologies acquired in 2014 and fully integrated into SDC in 2017; and hydrophobic and anti-reflective coating expert COTEC™ GmbH acquired in 2020; and then Coburn Technologies, which develops, manufactures and sells ophthalmic lens processing equipment, in 2022. Together these complementary technologies provide a complete end-to-end solution of products that contribute to the long-life and high functionality of ophthalmic lenses. Together these complementary technologies provide a complete end-to-end solution of products that contribute to the long-life and high functionality of ophthalmic lenses. And also, Mitsui Chemicals intends to leverage the collective coating material technology and know-how cultivated by these group of companies in an effort to provide new value and sustainable products to the automotive, construction, optical instruments and medical care fields, among others.

Source : Mitsui Chemicals

MODERN MEADOW AND STONE ISLAND ANNOUNCE BREAKTHROUGH IN TEXTILE INNOVATION USING BIOFABRICATION FOR SS24

NUTLEY, N.J. and MILAN, March 20, 2024 /PRNewswire/ -- Modern Meadow, a purpose-driven biotechnology company whose mission is to enable the world to transition to sustainable materials, and Stone Island, a luxury Italian men's apparel and outerwear brand respected for its vision of product research and experimentation, today announced their collaboration on an evolution of Stone Island's iconic Raso Gommato fabric for men's coats.

Bio Raso with Bio-Alloy™ Light Cover-TC is made of 100% organic cotton using Modern Meadow's proprietary Bio-Alloy™ technology. This technology enables lightweight textiles to have higher durability, maximum comfort and optimal look and feel. The Bio-Alloy technology in combination with garment dyeing with reactive dyes allows colors to be more vibrant and last longer while it remains PFC-free with anti-drop application. It also exemplifies Stone Island's philosophy of research, experimentation and usability of fibers and textiles applied to innovative design.

"This collaboration marks a significant milestone in our journey toward sustainable innovation, proving that cutting-edge technology and respect for the environment can go hand in hand," said David Williamson, PhD, president and chief operating officer of Modern Meadow. "By harnessing our revolutionary Bio-Alloy technology, our partners, such as Stone Island can bring new design attributes such as unique textures, vibrant colors and two-tone shades."

Raso Gommato, a satin weave cotton of military origin with the application of a polyurethane cover, was introduced in 1984 and is one of the definitive symbols of Stone Island aesthetics. The covers, specific polyurethane films laminated to one side of the fabric, are used in the assembly of the garment on the right or reverse side and make the fabric both water and wind proof. Throughout the years, they have continuously been translated into different versions, to achieve specific looks on the finished garments with the contribution of targeted dyeing recipes in an endless range of colors. Raso Gommato is used in a wide range of styles, colors and designs.

Source : PRNewswire

CLARIANT COMPLETED ACQUISITION OF LUCAS MEYER COSMETICS

MUTTENZ, April 3, 2024 - Clariant, a sustainability-focused specialty chemical company, today announces that it has completed the acquisition of Lucas Meyer Cosmetics, a leading provider of high-value ingredients for the cosmetics and personal care industry, from IFF for an Enterprise Value (EV) of USD 810 million (~ CHF 720 million). Purchase price will be subject to customary net debt and working capital adjustments.

"The acquisition of Lucas Meyer Cosmetics is a prime example of how we implement our purpose-led growth strategy and support our goal of accelerating customer- and sustainability-driven innovation," said Conrad Keijzer, Chief Executive Officer of Clariant. "The complementarity in customer portfolio, product portfolio, and regional strongholds and capabilities in R&D and in marketing make the combination of Clariant and Lucas Meyer Cosmetics a leading solutions provider for high value personal care brands."

"I see the acquisition of Lucas Meyer Cosmetics as a significant step forward for Care Chemicals. Customers as well as consumers increasingly demand high value natural ingredients," said Christian Vang, President of the Clariant Business Unit Care Chemicals and the Americas region. "I extend a warm welcome to 190 highly qualified professionals as our new colleagues at Clariant. We jointly look forward to exciting growth

opportunities and expect to increase annual sales to USD 180 million in 2028 from around USD 100 million currently."

The transaction further transforms Clariant's portfolio toward high-growth, high-margin and highly cash-generative specialty chemicals businesses and consumer end-markets underpinned by accelerating demand for natural and sustainable products. It increases Clariant's exposure to the active and functional cosmetic ingredients market in the Business Unit Care Chemicals.

Clariant will consolidate Lucas Meyer Cosmetics in its Business Unit Care Chemicals as of 2 April 2024. The acquisition was funded through the issuance in March 2024 of a CHF 350 million dual-tranche (CHF 200 million for 3 years at 2.375 % and CHF 150 million for 7 years at 2.75 %) senior unsecured bond and through a multi-currency bridge facility at an interest rate of around 4.4 % per annum, which is intended to be refinanced in 2024, subject to market conditions. Clariant expects no change to its investment-grade credit rating after closing.

Source : Press Release Finder

ARCHROMA, G-STAR RAW AND ADVANCE DENIM PROMOTE CLEANER DENIM PRODUCTION

Pratteln, Switzerland, 3 April 2024 - With the aim to help the denim industry reduce the environmental impact of its wastewater and move towards circularity, three leaders from across the denim supply chain have renewed their joint commitment to the production of aniline-free denim apparel based on Archroma's DENISOL® PURE INDIGO 30.

Archroma, a global leader in specialty chemicals towards sustainable solutions, has been working with innovative Dutch denim brand G-Star RAW and sustainable denim leader Advance Denim since 2019.

Their joint aim is to produce high-quality denim in authentic blue shades without the aniline impurity carried through from the synthesis of standard synthetic indigo. In traditional denim production, this aniline remains bound with the indigo pigment on the fabric; the remaining aniline is discharged during the dyeing and washing process. This can be a problem because aniline is toxic to aquatic life and two-thirds of aniline waste currently ends up in wastewater discharge where it could potentially pollute waterways and the ocean.

Archroma developed DENISOL® PURE INDIGO 30 to answer this key challenge. A 30% pre-reduced indigo solution, DENISOL® PURE INDIGO 30 makes it possible to produce indigo-dyed denim without aniline impurities throughout the process.

Easy to use with automated dosing, DENISOL® PURE INDIGO 30 significantly reduces the water needed for preparation, washing and wastewater treatment compared to indigo grains. It also reduces hazardous chemical consumption while allowing high reproducibility and creating the authentic and iconic deep indigo shades traditionally associated with denim.

"If we remove aniline from the indigo dyes, we also remove it from the denim production process and its wastewater, and thus eliminate the risk of pollution. Denim that is free of aniline can also be more efficiently and sustainability recycled and reused, making circularity a more viable option," Umberto De Vita, Market Segment Director for Denim, Archroma Textile Effects, said. "We are delighted to see trendsetters like G-Star RAW ramping up aniline-free production with DENISOL® PURE INDIGO 30, proving that sustainability is achievable with improved productivity and authentic deep indigo shades."

"To be here as the denim brand in the future, G-Star RAW challenges industry standards," Rebecka Sancho, G-Star RAW said. "We push boundaries in our journey to further close the loop by using sustainable materials, clean chemistry and by designing for durability and reuse. DENISOL® PURE INDIGO 30 helps us to minimize pollution and improve the environmental impact of our products without compromising on iconic indigo colors."

G-Star RAW is working towards making 20% of its entire collection from Cradle to Cradle Certified® fabrics by 2025. Its partnership with Archroma and Advance Denim contributes to this goal, since the aniline-free DENISOL® holds a Gold Level Material Health Certificate from the Cradle to Cradle Products Innovation Institute. DENISOL® PURE INDIGO 30 is also compliant with other major eco-standards and the requirements of leading retailers and brands.

"As a company that is dedicated to the production of denim that is both authentic and sustainable, Advance Denim is proud to work with industry innovators like Archroma and G-Star RAW," Amy Wang, Managing Director, Advance Denim, said. "We were the first mill in China to launch an aniline-free collection with Archroma and our new plant in the resort town of Nha Trang in Vietnam is a 100% aniline-free indigo factory

with DENISOL® PURE INDIGO 30 by Archroma."

Johan Van den Heede, Director – Europe Marketing, Advance Denim, added, "We are honored to stand alongside Archroma and G-Star RAW to pioneer cleaner denim production methods that reflect our unwavering commitment to sustainability and innovation."

Advance Denim's aniline-free indigo collection offers various rich authentic indigo shades in different yarn characters and sustainable fiber compositions with multiple innovative constructions.

Advance Denim, G-Star RAW and Archroma have previously collaborated to launch collections based on Archroma's EarthColors® technology, which upcycles plant waste from the herbal industry to create sustainable colorways.

Source : Archroma

BIOMASS-BASED POLYCARBONATEDIOL "BENEBIOL" ADOPTED FOR THE WATCH BAND OF CITIZEN WATCH

The Mitsubishi Chemical Group (hereinafter, "the MCG Group") is pleased to announce that its bio-mass-based polycarbonatediol (PCD) BENEBiOL™ was selected by Citizen Watch Co., Ltd. (Head office: Nishitokyo City, Tokyo) for use in its fall/winter 2024 CITIZEN PROMASTER model (Product No.: JV1007-07E). BENEBiOL™ will be used as a raw material for polyurethane for the watch band.

With BENEBiOL™, the MCG Group became first in the world to develop a biomass-based PCD. This product is mainly used as the primary raw material for polyurethane resins. The use of BENEBiOL™ helps increase the durability of polyurethane from the general level. In recognition of its high durability and environmental friendliness, Citizen Watch selected BENEBiOL™ for use in the watch band of PROMASTER, which is an icon among professional sports watches, known for superior durability and reliability in extreme outdoor environments on land, at sea, and in the air.

Going forward, by further developing BENEBiOL™, the MCG Group will deliver even more value-added products and contribute to the creation of a sustainable society.

Source : Mitsubishi Chemical

INTERNATIONAL NEWS

DOW STRENGTHENS AUTOMOTIVE COLLABORATIONS IN EUROPE WITH NEW MOBILITYSCIENCE™ STUDIO

Midland, Mich. – April 10, 2024 – Dow (NYSE: DOW) announced its expanded investment in MobilityScience™ capabilities today by opening the doors of its first European MobilityScience™ Studio in Correggio, Italy, marking its long-term commitment to the mobility industry as it continues to transform and grow.

The new studio will allow Dow to further collaborate with Tiers and OEMs on-site and beyond, growing its existing innovative solutions. In expanding its presence in Italy, the studio will support Dow's Research & Development and Technical Services & Development engineers in focusing on new sustainable solutions within the mobility market and others, paving the way for new ecosystem collaborations in Europe.

"Dow is thrilled to commemorate the opening of the first MobilityScience™ innovation studio in Europe," said Ryan Smith, global marketing director for Dow MobilityScience™. "This investment in Correggio, Italy will serve as a hub for Dow's technical and commercial experts to connect with the European mobility industry and drive forward the necessary in-

vestments to ensure global success in the burgeoning EV market," he continued. "Electrification is the future of mobility and Dow's unique breath of chemistry knowledge will provide much of the toolbox needed by our global partners in mobility."

This weekend, Dow will open its studio's doors for the first time to select customers in conjunction with the 2024 Misano E-Prix where technical partner Jaguar TCS Racing continues their pursuit for podiums as they compete in the ABB FIA Formula E World Championship.

The Correggio studio will be the third of Dow's state-of-the-art MobilityScience™ facilities. The existing MobilityScience™ Studios, located in Midland, Michigan and Lake Jackson, Texas, offer collaborative workspaces for acoustic and powertrain testing capabilities for fast-moving automotive applications. Through these studios, Dow is able to create tailor-made noise, vibration and harshness (NVH) and sealing, powertrain and fluid transfer system options unique to any specifications.

Dow builds on 100+ years of transportation experience and expertise in application development to deliver innovative, cutting-edge solutions that keep the world moving. For more detailed information on Dow's ongoing commitment to the mobility industry visit: https://www.dow.com/mobilityscience

Source : Dow

LG WATER SOLUTIONS AWARDED MAJOR SWRO MEMBRANE CONTRACT FOR WORLD'S LARGEST FERTILIZER COMPLEX IN MOROCCO

LG Water Solutions, LG Chem's business unit specializing in water treatment and the manufacturer of NanoH2O™ reverse osmosis (RO) membranes, has secured a supply order of seawater RO (SWRO) membrane elements through a local EPC for an expansion of a seawater desalination facility at the OCP Jorf Lasfar Complex. Located approximately 20 km south of El-Jadida, on the Atlantic coast of Morocco, the site is currently the world's largest fertilizer complex. LG Water Solutions will supply over 18,000 units of LG SW 440 R high-rejection membranes for the SWRO system with a production capacity of 246,000 m3/day, where the desalinated water will be used for industrial purposes within the complex and supply potable water to around 1.5 million people in the towns of Safi and El Jadida.

LG Water Solutions has been supplying RO membrane elements through several global EPCs for modular SWRO plants in the Jorf Lasfar complex and Safi in Morocco since 2022. The expansion project, named Jorf Wave 2 Desalination Plant, is integral to OCP Group's water sustainability program aimed to alleviate water stress in the region, where desalination via reverse osmosis has become a proven method of sustainably managing water resources. Furthermore, with energy consumption as one of the biggest limitations in desalination, LG Water Solutions' industry-leading salt rejection NanoH2O™ RO membranes will help lower feed pressures while maintaining high productivity, reducing energy use and the emission of greenhouse gases.

Since the inception of its business, LG Water Solutions has built a solid track record in the global RO market, for instance, accruing more than 5,000,000 m3/day of contracted SWRO capacity between 2016 and 2023. Recently, LG Water Solutions expanded its footprint into various industrial sectors, especially sites seeking to improve water stewardship.

Last year, LG Water Solutions supplied over 10,000 RO membrane elements to the Citic Guoan project, China's largest salt lake-based lithium carbonate production site. The project owner, TUS-Qingyuan, aims to produce 20,000 tonnes of battery-grade lithium carbonate annually, enough lithium to build batteries for nearly 500,000 electric vehicles (EVs). LG Water Solutions' RO membranes are crucial in TUS-Qingyuan's advanced lithium extraction technology, which recovers lithium from salt lakes.

In Chile, LG Water Solutions has improved the operational efficiency of the RO systems at Minera Escondida, the world's largest copper mine. The plant initially used RO membranes from a different manufacturer, but Minera Escondida needed to improve the operational efficiency of the RO system. The plant owner, BHP Billiton, replaced one of its SWRO trains with LG NanoH2O™ RO membranes at the end of 2021, and as a result, delivered superior performance, enabling the facility to operate under lower feed pressures, reducing energy usage and operational expenses. This positive outcome led to a subsequent replacement order.

Approximately 1% of the world's population currently depends on desalinated water to meet its daily needs, but the UN expects this number to grow to 14% by 2025. LG Water Solutions' groundbreaking Thin Film Nanocomposite (TFN) RO technology, supported by a dedicated expert team delivering excellent technical and commercial support, is aligned with the growing demand to secure clean water sources.

Source : LG Chem

Continued from Pg 30

highly toxic and hazardous. This makes their safe disposal extremely difficult. Cleaner alternatives such as nickel plating are increasingly favored.

Market Scenario

In terms of market dynamics, the Electroplating industry in India is worth about Rs 12,000 Crore. Sectors such as EVs, Batteries, and Hydrogen will be the drivers for future growth. The industry comprises around 3 lakh electroplaters and is characterized by competitiveness and price sensitivity. Initiatives like " Make in India" and production incentive schemes by the government are anticipated to support growth. However, the future may also necessitate different electroplating solutions. This will arise due to special requirements, which will need capital infusion. Overall the market is expected to grow at about 5 % CAGR. It is expected that global companies could participate in the future in this segment when the market becomes more lucrative.

Conclusion

In conclusion, there will be many challenges to overcome in the future and solutions for the same provided with the help of human ingenuity. However environmental concerns of safe disposal of wastes and hazardous chemicals must be addressed. It is a delicate balance between technology and preservation. For in the end, it is not the metals we plate, but the legacy we leave behind, that truly shines the brightest.

Source : Team Chemical Market

Disrupting The Decorative Paints Market Birla Opus

A recent development that could potentially disrupt the present paints market in India is the entry of Aditya Birla Group's flagship company, Grasim Industries, into the decorative paints business. The investment is around Rs 10,000 Crores. The revenue target is Rs 10,000 Crores/ year within 3 years, aiming to achieve profitability. The launch is unprecedented even on a global scale starting with a pan-India operation. Grasim Industries with its well-known product and distribution network in cement, intends to capitalize on its many years of experience in this area. Their objective is to achieve the second position in India's decorative paints segment.

Present Scenario

Currently, the market is dominated by four major players: Asian Paints, Berger Paints, Kansai Nerolac, and Akzo Nobel collectively holding 75 % of the market share. The estimated market for decorative paints is about Rs 70,000 Crores annually. The final paint capacity to be installed by Grasim Industries is 1332

MLPA (million liters per Annum). Presently 3 of their plants are in operation at Panipat (Haryana), Ludhiana (Punjab), and Cheyyar (Tamil Nadu). Three more plants will be added in the future at Chamrajnagar (Karnataka), Mahad (Maharashtra), and Kharagpur (West Bengal). The company has also established an R&D facility in Maharashtra. New players like JSW and Pidilite have also entered this segment.

Future Prospects

The Indian economy is forecasted to grow at a CAGR of 7 %. The decorative paints primarily driven by the housing sector are expected to witness accelerated growth to reach Rs 1 lakh Crore per year in 5 years. Thus, increasing urbanization infrastructure development and lifestyle changes will contribute to driving higher consumption.

Please refer to the histogram above. Our present per capita paint consumption of 2.5 Kg is well below the Global average of 10 Kg. Considering the provided data, we could infer that decorative paints are a high-growth market and also a strategic portfolio choice.

Source : Team Chemical Market

Misty Wonders Enter The World Of Aerosols

Introduction

In the shadowy realm of modern science lies a phenomenon both ubiquitous and enigmatic - the aerosol. To the casual observer Aerosols are mere mists, a fleeting wisp escaping from a canister or wafting through the air. In our bustling world aerosols pervade our lives, from air fresheners to potent industrial emissions. From laboratories to boardrooms, from classrooms to the corridors

of power, the implications of Aerosol science are profound. In this article we give a brief outline of this product and the implications of its usage.

Aerosols are colloidal systems. One familiar example is when the dispersed phase (payload or contents) is a liquid or solid and the dispersing medium (propellant) is in the form of a gas. Smoke from an automobile exhaust, mist, fog are examples of aerosols. The illustration above depicts the dispersal of paint from an sealed aerosol canister(can). Liquid paint is forced up the tube due to the propellant (CFC) under high pressure. By depressing the button at the tube's end, the valve opens. Contents of the tube are then dispersed into the atmosphere through a small opening forming a spray or mist. Control over the spray volume is facilitated by the button. Aerosol cans are typically constructed from thin sheet steel with an internal coating of tin. However, aluminium cans are generally used for more expensive items necessitating a premium aesthetic, such as personal care products. The can's internal pressure is maintained constant. This ensures the spray remains consistent even when the contents are depleted. Proper operation requires the can to be held upright during spraying.

Propellant and Contents

For effective sprays , the propellant should posses a higher vapour pressure and lower boiling points. They must adequately dissolve with the contents, and remain chemically stable under the conditions present within the canister. Chemical instability could lead to decomposition, reactions with the contents or changes in performance over time. Additionally, they should be non - toxic, low ODP (ozone depletion potential), low flammability types. Choosing a propellent with all these characteristics poses significant challenges, thus highlighting the complexities of Aerosol science. Common propellants and their compatible contents include :

Hydrocarbons (e.g. Propane, Butane) are widely used due to their affordability, finding applications in insecticides, air fresheners, household cleaners, lubricants, and paints. Gives a consistent spray and good dispensing.

Dimethyl Ether (DME) . Relatively environment friendly with low toxicity. Efficient in dispersing in aerosol form. Commonly found in shaving creams, hair sprays and deodorants.

Carbondioxide. (CO_2). Serves as an inert and non - flammable gas , utilized in medical sprays like inhalers.

Nitrous oxide (N_2O). Though less common in aerosol cans due to security concerns , functions as a propellant for whipped cream dispensers due to its texture

CFC (Chlorofluorocarbons). Once prevelent as propellents in products like pesticides, paints and air freshners, have been phased out due to their ozone depleting nature.

Environmental impact of Aerosols

Propellents harming the envoirnment due to Aerosol dispersions from canned products were mainly chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs) and Halon. Halon was very effective as a fire extinguisher. Aerosol research has enabled the substitution of these propellants to a large extent. They were known to cause depletion of the ozone layer leading to global warming. The smoke emanating from chimneys of a coal fired power plant are also Aerosols. They contain NOx and SOx gases that lead to acid rain. Many countries have regulations restricting or banning the used of certain propellants, especially those deemed harmful to human health or environment.

Cautions

Aerosol propellants can pose fire and explosion hazards , since they may be a typical combination of ignitable materials. Some of them could cause intoxication when inhaled. Spray dusters called " Canned Air" , can sometimes be fatal if inhaled directly. They are typically used for cleaning electronic circuits especially in hard to reach areas and tight spots. The name can mislead people. In reality, they do not contain air. A spray, when released from the canister nozzle, undergoes rapid adiabatic expansion, resulting in a drop in temperature . It may cause frosting when directed to the skin. Therefore it is advisable to thoroughly review all details, particularly cautionary information, before usage.

Conclusion

From the intricacies of respiratory health to the balance of Earth's climate, aerosols have a role to play. We probably have more questions than answers. Yet admist the fog of uncertainty, one aspect remains clear - the imperative of continued inquiry and vigilance. We should not view aerosols as a barrier to progress, but as a beacon where science and society march hand - in - hand towards a brighter tomorrow. There lies both peril and promise, a reminder that in the delicate balance of nature and human endeavour lies the key to our shared destiny.

Source : Team Chemical Market

DAP Launches Only Premium Hybrid Construction Adhesive Available in 28-Fluid Ounce Cartridge

BALTIMORE, April 2, 2024 / PRNewswire/ -- DAP, a leader in the home improvement and construction products industry, is introducing the new HD Max Construction Adhesive, a premium hybrid formula with polyurethane strength that provides superior durability and powerful adhesion even in extreme temperatures. Built for the toughest applications, DAP's HD Max is the first hybrid construction adhesive on the market available in a 28-Fluid Ounce cartridge, making it an excellent value hybrid formula for pros looking to accomplish larger jobs.

"DAP formulated HD Max to provide hard-working pros with a premium hybrid formula that would be a workhorse adhesive for many projects, in many conditions," said Matt Nolder, Adhesives Product Manager at DAP. "The 28-fluid ounce cartridge makes HD Max the perfect combination of value and performance, offering pros a hybrid solution for larger jobs."

Featuring polyurethane strength, HD Max bonds virtually everything – from non-porous substrates like aluminum, PVC, and mirror to porous, textured materials like brick, concrete and drywall – with exceptional adhesion and superior durability in both indoor and outdoor environments. Whether working in scorching heat or freezing cold, HD Max rises to the challenge with its ability to bond in extreme temperatures, as it can be gunned out and bond anywhere from 0-120 degrees Fahrenheit. Its low odor formula also makes it ideal for interior use.

HD Max not only redefines construction adhesive value, but also elevates user experience with its ability to adhere to wet surfaces while being easy to gun and control. In addition, HD Max goes above and beyond by delivering a solid and waterproof bond that's reliable and flexible. From landscape and tub surround to mirror, marble and granite installation, its durable and long-lasting bond makes it the go-to solution for a variety of projects.

"DAP's new HD Max alleviates project limitations pros face from typical hybrid construction adhesive cartridge sizing. HD Max's 28-fluid ounce cartridge allows them to tackle large projects and a wide variety of applications with just one hybrid product," added Nolder.

DAP HD Max is part of a high-performance line up of adhesives that provide strong, long-lasting bonds. The family of products includes Heavy Duty, All Purpose, Drywall, Foamboard and Subfloor construction adhesives. HD Max is available in 9 fl oz and 28 fl oz cartridges at select hardware stores and lumber yards nationwide. For more information, visit www.DAP.com.

Source : PRNewswire

Huge Investment In Solar Energy By Engie

French energy giant Engie has announced plans to invest Rs 7,000 Crores by 2025 in the installation of 2 GW (2000 MW) of solar power. These projects are slated for installation in the states of Gujarat and Rajasthan. With favorable government policies promoting renewable energy, the solar sector's return on investment (ROI) appears promising.

Engie operates within various sectors including renewable energy, energy solutions, flexible generation, and infrastructure. While specific project details are yet to be disclosed, given Engie's extensive experience across its business domains, we anticipate the development of optimal solutions to address the requirements of the electrical grid.

Recently, Engie successfully launched the largest battery energy storage system in Latin Amer-

ica. Pictured above, this project utilizes lithium batteries with a total storage capacity of 638 MWh. Energy generated from solar modules can be stored in these batteries and injected into the electrical grid during peak periods. Such systems play a crucial role in reducing CO_2 emissions, as they alleviate the need to rely on coal-burning thermal power plants to meet peak power demands.

Engie's long-term strategy includes servicing the renewables segment, with plans to eventually integrate wind, solar, and storage components. With an annual turnover of 82.6 billion euros, the group is listed on the Paris and Brussels stock exchanges.

Source : Team Chemical Market

Guarding With Flex And Agility Kevlar Exo Advanced Body Armour

Modern warfare is ever-evolving, but one thing remains constant: the paramount importance of protecting military personnel. The technologies keep advancing, and so do the threats. This brings in new challenges in safeguarding the soldiers and what's more challenging is that to do it without disrupting their comfort. Armour has seen tremendous evolution over time and its profound journey in history speaks testament for itself. In this article, we have discussed the latest advancement in body armour, the success story and the commitment of the company that pioneered the production of soft body armour. Let's begin.

Body Armour should get in the way when it needs to and Kevlar has been the most appreciated body armour by the UK military sector, as it has been ruling multiple industries for products such as tires, cables, ropes and so on, due to its impressive strength-to-weight ratio. After ruling the industries for over 40 years, the company has come up with an impressive advancement in body armour – Kevlar Exo.

Introducing Kevlar EXO Aramid Fiber-Advanced armour:

Kevlar EXO – Significant advancement in body armour is considered the most significant aramid fibre innovation that has been produced in the defence sector for over 50 years. DuPont proudly refers to this advancement as an entirely new technology that has ever been deployed in the soft body armour industry.

Commenting on Kevlar EXO, Steven LaGanke, global business leader at DuPont said, "Kevlar EXO offers never-seen-before kind of ballistic and thermal performance, without compromising on weight and flexibility". Therefore the military members wearing the soft armour made of Kevlar EXO can operate at peak performance. The product is expected to cater to military members, law enforcement officers, private security members and emergency responders.

These professionals perform physically demanding tasks, and they are bound to give out more energy during critical defensive operations. In such instances, Kevlar EXO helps them in managing their functioning most effectively.

Kevlar EXO is all set and offers the wearer great comfort and it removes every distraction for the user physically letting them focus on the task at hand, as they believe when there is less in their way physically, they have less in their way mentally.

With KEVLAR EXO, professionals find it easier to leap, peep, crouch, climb, crawl and do physically demanding tasks with ease.

Features of Kevlar EXO:

Offers supreme flexibility and comfort, contouring curves and body lines with very minimal restrictions.

Delivers the same degree of protection even after five years of usage

Flame and temperature-resistant, can withstand temperature and ignition up to 500 degrees Celsius

Highly customizable for every body type

Products are manufactured at the DuPont manufacturing facility located at Spruance, Virginia, USA.

Why do we need advancements in soft body armour?

Conventional armours are manufactured by weaving rigid plates in armours which makes them hard barriers and uncomfortable for the wearer to function. Whereas, these soft armours catch the projectile like the way the net catches a ball, deforming and slowing down the force of the projectile.

On the other hand, conventional armours impede the agility of the wearer, soft armours are known for their comfort and light-weight. The company has introduced Aramid fibres, which are the contraction of aromatic polyamide. The Aramid fibres contain rigid polymer chains that are interconnected by robust hydrogen bonds. This robustness of hydrogen bonds helps in the effective transfer of mechanical stress. Thus we get the Aramid fibres that are both flexible and strong.

New testing methods to evaluate the performance of armours by DuPont:

The Ministry of Defence(MOD), skilled members of the Biomedical Sciences Department at the Defence Science and Technology Laboratory(Dstl) joined hands with Dupont and developed test methods to evaluate the performance of body armour against Behind Armour Blunt Trauma as the team realized the worst part of trauma due to high-velocity rifle bullets, even when the body armours succeeded in stopping the bullets.

DuPont is known for its range of personal protection products and solutions, and its trusted brands in the industry such as Kevlar, Noxmex, and Tyvek, to cater to multiple safety requirements.
DuPont is known for its technology-based innovations and solutions transforming multiple industries and everyday life. Their product Kevlar EXO meets the standards set by NIJ and stands out from the rest of the products available in the market.

Conclusion:

It was during the times of the Korean war the armours began developing their features; from fibre-reinforced plastics to aluminium segments woven into vests made of nylon material. Then these vests witnessed massive advancements in weight and began incorporating "chicken plates" that were made of boron carbide, and silicon carbide. After all these years and technological advancements, Kevlar has shown the world its sophisticated facet of protection without compromising agility and comfort.

Vinodini Harish

Shielding The Environment Bio-Based Phone Cases For A Plastic-Free Future

You may have read about the environmental impact created by plastic bottles and bags, the impact due to the plastic phone cases is lost in translation. Get ready for a big alert, smartphone covers are disrupting your endocrine system and could lead to reproductive and developmental problems. You probably would have read it twice, but you read it right the first time. Plastic phone cases use harmful chemicals like Bisphenol A (BPA), phthalates, and others. But aren't these Plastic wastes collected and sent to recycling procedures?

They do, but not all sizes of phone cases are accepted at the recycling facilities and not all are straightforward. Then, what is the solution? you may ask. Bio-based phone cases. We have a lot to talk about the topic and let's begin.

People buy phone cases for smartphones and they are discarded in dumps. It takes hundreds of years for them to deteriorate fully. The globe has become more plastic-conscious than ever before, but plastic phone cases have seeped into fashion and become more staple accessory as they serve more than protection to these smartphones.

When the threat is highly evident, there lies a misconception that replacing plastic phone cases isn't important. Phone cases are considered smaller items when compared to plastic bags and the life of phone cases is comparatively longer and the rate of disposal should be lesser than single-use items like plastic bags. But the problem is bigger than it appears. About 80.63% of the global population has a smartphone. (No surprise here.) and in the US alone, about 79% of the country's smartphone users own plastic phone cases. There is nothing to be surprised of the fact.

There is no way out other than switching to bio-based alternatives. BASF's innovative Elastollan is expected to have a great impact in that regard.

What is BASF's Innovative Elastollan?

BASF's innovative Elastollan is a bio-based thermoplastic polyurethane (TPU) that has about 53% bio-based content.

Features:

- They are very soft in texture
- Glass fibre reinforced
- Flame retardant
- Highly transparent
- High abrasion resistant
- High tensile strength
- and so on.

Elastollan is utilized in a wide range of industrial sectors such as automobiles, electronics, sports shoes, medicine, food, and other technologies.

Recently, Hamee Corps, headquartered in Japan and operating branches in Korea, Shanghai, and the US has utilized Elastollan N for their phone cases range called "HIGHER". The range of phone cases exhibits TPU's excellent features such as supreme durability, and transparency. However, the addition of a bio-based version has further optimized the UV resistance and anti-yellowing properties.

Tomoyuki Matsuda, the head of Product Development at Hamee Corp, expressed joy over the successful launch of the bio-based phone cases 'HIGHER', which are also the first MagSafe-compatible covers.

How well it is received on the consumer side?

Since its launch in 2021, the HIGHER range has achieved a cumulative total of over 60 SKUs!

Thus the company is extremely delighted to have developed their new product as they produce products with high performance with sustainable material solutions such as Elastollan N.

The company has reported that its product range 'HIGHER' will be exhibited at CHINAPLAS 2024 located in Shanghai, China, between the dates April 23-26 this year.

Takeaway:

Plastic phone cases have caused great distress to marine life and the ecosystem as the growing demand for these phone cases causes an immense amount of plastic waste disposed into the earth in a brief period. Not just that, it also uses plenty of resources like oil, and natural gas for processing. Extending the usage of phone cases is expected to cut down the probability of chances to buy new ones, however, the problem would still linger. Therefore, the inclusion of bio-based products and their replacements for every household item would lead to the birth of a better world.

Vinodini Harish

Shell Chemicals and Braskem bring Certified Bio-Attributed and Bio-Circular Propylene and Polypropylene to the U.S. Market

Shell Chemicals recently started to supply Braskem (BM&FBOVESPA: BRKM3, BRKM5 and BRKM6; NYSE: BAK; LATIBEX: XBRK) with bio-attributed and bio-circular propylene feedstocks, based on a mass balance approach and independently certified by a third party.

Braskem will utilize such feedstocks for the manufacture of bio-attributed and bio-circular polypropylene enabling more sustainable options for growing consumer demand in the packaging, film, automotive, and consumer goods markets.

Mark Nikolich, Vice President of Olefins and Polyolefins, Braskem North America stated, "Braskem is a leader in the innovation and production of bio-based materials, and we continue to see demand grow for more renewable solutions in our markets. In January 2023, we communicated the evaluation of a Braskem-led project to produce bio-based propylene in the U.S. With today's announcement, we will continue to focus our work on sources of sustainable propylene, in this case, bio-attributed and bio-circular, to support our polypropylene clients in meeting their carbon reduction and circularity goals. This is possible because of forward-thinking suppliers like Shell. Ultimately, we believe that these different renewable solutions are complementary and important steps forward as the plastics industry evolves to a more sustainable future. We will continue to develop and provide solutions to support our global clients in reaching their sustainability goals."

Shell is replacing hydrocarbon feedstock with a bio-attributed and bio-circular feedstock in its propylene product, which has the potential to reduce greenhouse gases and contribute to a circular economy.

"Shell is proud to be working with Braskem to supply the bio-attributed and bio-circular feedstocks that go into the everyday products that support modern life. This deal further illustrates how Shell Chemicals is growing its portfolio of sustainable chemicals and, by using bio-attributed and bio-circular feedstocks, Shell is progressing its strategy to lower greenhouse gas emissions from its operations and to be a net-zero emissions energy business by 2050," said Sean Clarry, Shell Chemicals' Senior Vice President Commercial.

The recent collaboration between Shell and Braskem in Europe, aimed at enhancing the utilization of circular content in Braskem's polypropylene production, reinforces Braskem's commitment to achieving carbon neutrality and advancing its circular economy goals by 2050.

Shell has also set a target to reduce absolute emissions by 50% by 2030, compared to 2016 levels on a net basis. This covers all emissions in Scope 1, which come directly from its operations, and in Scope 2, from the energy Shell buys to run its operations, under its operational control. Mass balance is an independent accounting process and widely used across the industry which enables Shell to attribute bio-circular and bio-attributed content to specific end products when produced with a mix of traditional and novel feedstocks. The process is independently verified by a third-party certification body.

Mass balance is an independent accounting process and widely used across the industry which enables Shell to attribute bio-circular and bio-attributed content to specific end products when produced with a mix of traditional and novel feedstocks. The process is independently verified by a third-party certification body.

Source : Braskem

Mangalam Organics Ltd - Trending Towards A Bright Future

One of the few chemical companies that have a diverse portfolio of end products used in a myriad of applications is Mangalam Organics Ltd. It produces 11 Terpene products and 4 Resin products.

To name a few, these are used in the Paint Industry, Personal Care products, Automobile tires, flavoring agents with fragrance, neutralizing agents, food additives, rubber formulations, adhesives, and printing inks. The breadth of its product range underscores its resilience, as fluctuations in demand for one product can be balanced by upsurges in others.

Founded in 1981, this highly automated plant is located in Khopoli, Maharashtra on the Mumbai - Pune expressway. The modern JNPT container terminal port is about 60 km away. Its strategic location thus serves both, the domestic and the overseas markets.

Benefiting from a top management team having over 3 decades of experience, this company is ISO 9000/14001/ OHSAS 18001 certified, which reflects its commitment to stringent quality and safety protocols for plant and personnel. As of current writing, its market Cap was approx Rs 292 Crores with a P/E ratio of 117.87. It is listed both on the BSE and NSE stock exchanges. Given the wide range of products and their applications, and India's projected growth rate of 7% CAGR, Mangalam Organics Limited is poised for a promising future..!

Source : Team Chemical Market

Growth And Impact Of The Petrochemical Industry

Introduction:

The world is filled with the products of the Petrochemical industry, the cars we drive, the electronic goods that have become inseparable, the packaging we need and every place we blink we are surrounded by petrochemical products. With the growing economy which will become $5 trillion by 2025, the share of the petrochemical sector is expected to become more prominent. In this article we have covered the trends, and reasons that are facilitating the growth of the petrochemical sector in India. However, we have also covered insights on the rising demand for specific products that are contributing to the growth of the industry. If you are closely following the developments and trends of the Petrochemical industry, you will love reading this article. Let's begin.

Accomplishments in the Petrochemical industry:

The accomplishments in the past decade in the Petrochemical industry have aided the growth of the petrochemical market. The Annual ethylene production reached USD 125.02 billion in 2022 and due to the carcinogenic nature of ethylene, the companies have started focusing on the bio-based green polyethylene compounds which are easy to produce, consume minimal energy for production and offer similar versatility as chemically synthesized ones.

"'I'm greenT polyethylene plastic' made of sugarcane"

Braskem, a Brazilian company partnered with LEGO group and produced 'Im greenT polyethylene plastic' that is made of sugarcane and 100% recyclable.

Challenges Involved in the Petrochemical Industry:

The petrochemical sector in India is facing oversupply challenges due to present conditions. The global economy has not recovered as expected thus the global demand for petrochemical products has softened, which has coupled with an oversupply situation. This condition has exerted pressure on the margins and profitability of the market players.

Limitation in conventional feedstocks is expected shortly, which is because the investments for these feedstocks made by North America, and the Middle East have significantly reduced since the demand for ethane has increased substantially. Since the majority of conventional feedstocks are constrained, the factor presents itself as a significant challenge for the growth of petrochemical industries.

Changing macroeconomic trends in China such as lower expenditure for infrastructure, and increased purchases of consumer goods like cars, vehicles etc that has driven the economy through various services and other purchases. Thus, economic growth has slowed down in some emerging economies. This has impacted the growth of the Petrochemical industry.

Companies like Gandhar oil refineries have adopted strong financial management practices and efficient operations to come up with diversified portfolios to mitigate the impact of external shocks. In their Annual reports, they have talked about their series of products despite the effect of turbulence in the global economy and the crude oil crisis.

Gandhar Oil company has performed exceedingly well financially, generating the highest ever revenue of about INR3500 crore in FY2022. They have adopted some of the best technological advancements such as Jet mixing, Fast-unload to reduce process time.

Growth opportunities:

The Department of Chemicals and Petrochemicals Industry of India has implemented several initiatives that have improved the industry's competitiveness, quality, and output. For instance, some of India's initiatives such as Make in India, Aatmanirbhar Bharat Abhiyan, and Production-Linked Incentive(PLI) schemes have encouraged domestic manufacturing and facilitated the momentum of exporting goods.

Some notable measures such as mandatory standards set by the Bureau of Indian Standards (BIS), public procurement policies for chemicals and petrochemicals, and schemes facilitating the setting up of plastic parks and facilities to support research and innovation have stimulated the growth of petrochemical industries.

What to expect in the Petrochemical industry?

Although the demand for the products of the Petrochemical industry will not go down, only less growth is expected, and consumer spending is expected to slow down. Therefore, on observing we realize companies are focusing on cost and becoming more cost-conscious. To counterbalance the growth and trends, it is recommended to focus on efficiency.

Chemical companies are tweaking their strategies:

"Chemical businesses are focusing on building their capabilities for tomorrow, taking cost from the supply chain and supercharging it," said Patrick Hore, Global Vertical head of chemicals at Maersk.

Companies are expected to take a more disciplined route in terms of capacity additions as the returns are expected to be more modest and all the key players are determined to focus on the core ca-

pabilities and strategies.

Digital and advanced analytics help in enhancing the new level of productivity.

Experts advise companies to work on reinventing their interface with oil refineries since the gas-driven era is dropping down. Similarly, they are expected to manage the transition linear to a circular economy. Because in the linear-based economy, plastic-based products get used once before they are disposed of.

Clean Technology Scenario:

The growing number of applications in cutting-edge technologies, and clean technologies which are essential to building a substantial energy system helps in the production, usage, and disposal of petrochemical-derived products.

In the Clean Technology Scenario, it is expected that there would be a reduction of 45% in direct CO2 emissions by 2050 and the emissions are expected to reduce by 60% in the CTS than that of RTS by 2050.

However substantial efforts are expected as the industry is experiencing shifts from conventional methods to CTS,

which is led by carbon capture, utilization and storage, coal-to-gas feedstock shifts, and energy efficiencies.

Best practices suggested by experts to improve value:

Capturing value across all the workstreams and employing best practices across financial and functional benchmarks. When intense interactions emerge within the organizations, that's when the organizations can identify the real insights and understand what to prioritize and where to start.

Therefore, the experts were encouraged to come up with a data analysis set, idea-generation workshops, discussions on internal subject-matter experts and focused effort on unearthing ideas from the results obtained. This will lead to solid initiatives and a bankable plan that creates a more tangible impact.

Experts also advise focusing on bringing a more disciplined approach to 'Capital spending'. Since the Petrochemical industry is naturally a capital-intensive sector, the players are expected to focus on the investment to generate good returns. Getting access to advanced feedstocks, deploying robust capital approval processes, value engineering, design optimization, incentives, and control towers during execution are all crucial for the development of the Petrochemical industry.

Take away:

The Petrochemical industry is struggling with improper capital planning, potential oversupply, limited supply of advantaged feedstock and improper workforce management. However, the pressure on using fossil fuel more to bring up the economy, electrification and increasing incorporation of digital initiatives such as cutting-edge tools, and digital insights are monitoring the demand changes, capacity additions, cost shifts and other factors. These factors are bolstering the growth of the Petrochemical industry.

Vinodini Harish

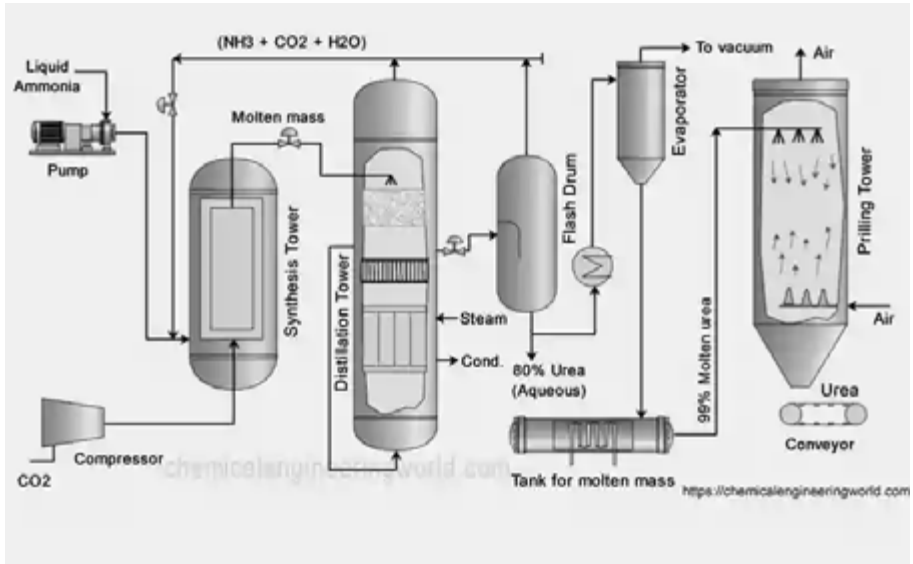
Cultivating Success Fertilizers In Agriculture

Introduction

In the sprawling world of modern agriculture, there exists often an overlooked but Wvital ingredient for food production: Chemical fertilizers. These unassuming substances possess an unparalleled power to shape the destiny of nations, determine the fates of millions, and hold the delicate balance of ecosystems in their granular grasp. Like silent sentinels, they stand as the unsung heroes of India's agricultural revolution, enabling bountiful harvests from vast swathes of land, ushering the Benefits of fertilizers upon which our survival hinges. Their story is one of innovation, of ingenuity, and a relentless pursuit of higher yields in an ever-hungry world.

Background

It is widely believed that ancient civilizations like Mesopotamia and Egypt were the first to discover the transformative properties of manure and compost. The very first formulation of Chemical fertilizers is generally attributed to German chemist Justus von Liebig. In 1910 and 1920s the Haber and Ostwald process was invented and subsequently utilized for fertilizer production. In India, the first superphosphate plant was established at Ranipet (Tamil Nadu). Thereafter Fertilizers and Chemicals Travancore (FACT) in Kerala and Fertilizer Corporation of India in Sindhri (Jharkhand) were established. The Green Revolution in India in the late 60s spurred significant investment in this sector from Public, Private, and Co- cooperative, entities, driven by favorable government policies. The last 50 years have seen a tremendous upswing in fertilizer consumption as the Benefits of fertilizers became evident. The table below provides details of fertilizer consumption in India:



FertiliserIndia.com

Fertilizer Production, Import & Sales in India (Qty. in Lac Tons) & Variation in %age

Fertilizer	Apr to Nov' 2023			Apr to Nov' 2022			Variation over 2022 (in %age)		
	Production	Import	Sales	Production	Import	Sales	Production	Import	Sales
Urea	269	49	258	187	46	232	12	3	11
DAP	31	46	90	27	53	83	11	-13	8
MOP	0	19	11	0	12	11	0	60	0
NPK Complex	65	17	88	62	19	74	4	-14	19
All India Total	**304**	**129**	**448**	**277**	**130**	**401**	**10**	**-1**	**12**

Availability is excluding O.B as on 1st April 2023

Fertilizer Consumption (Courtesy : FertiliserIndia.com)

Urea-based fertilizers exhibit the highest usage and are anticipated to grow at 4.7% CAGR. We are nearing self-sufficiency in urea production, with projections indicating that we will cease imports by the end of 2025. This aligns with the government policy of Atmanirbhar Bharat (Self Sufficiency). The process of manufacture of Urea is briefly outlined below:

Urea Manufacturing Process

Urea is an organic chemical compound, also referred to as Carbamide. Commonly available as prills or granules, they are highly soluble in water and can be easily diluted to the required concentration. With a nitrogen content of 46%, it boasts a high nutrient value. Please refer to the illustration above. Liquid ammonia(NH3) and Carbon dioxide are transported to a Synthesis tower. To initiate the first reaction, the pressure and temperatures are nearly maintained at 14Mpa and 170 to 190 deg C. The reaction is highly exothermic. The heat released is in the form of process steam and can be utilized elsewhere in the process. The Ammonium Carbomate produced is led into a distillation tower, where it decomposes to form urea and water in an endothermic reaction. Unreacted materials are recycled as depicted in the figure. The resulting product is subsequently led into an evaporator for concentration, done at an optimum temperature to prevent crystallization. It is then fed into a prilling tower, where it encounters compressed air in a counter-flow current. The urea gets solidified and the air helps in shaping it in the form of prills or granules. This final product is packed into bags for distribution.

Sometimes the prills are coated with neem oil, which preserves the nitrogen component. It slows down the release of nitrogen, thereby reducing the urea requirement. This indirectly also saves on fertilizer subsidies. Urea is an inexpensive form of Synthetic fertilizer and is produced in large quantities.

Major Players

Being a dynamic sector, it is marked by mergers and acquisitions, expansion, and investment plans. Growth is projected is 4.7% CAGR between 2024 and 2032, driven by increasing demand for food due to population growth, limited land availability, and higher disposable incomes. Key players in the Indian Fertilizer market include Coromandel International Ltd, Chambal Fertilizers and Chemicals Ltd, Gujarat Narmada Fertilizers and Chemicals Ltd, Indian Farmers Fertilizer Co-operative Ltd (IFFCO), and Rama Phosphates Ltd.

Additionally, United Phosphorous Ltd (UPL) is an Indian multinational company that manufactures and markets agrochemicals and various chemical products.

A portion of the urea produced is also used in urea-formaldehyde resins for wood-based panels such as plywood, particle board, and fibreboard. Other minor usages are for explosives, animal feed, etc.

Recently there has been considerable interest shown in the IFFCO nano urea spraying scheme. Here drones are employed in spraying nano urea over crops. This method proves to be more effective than other Fertilizer application techniques.

Envoirmental Impact

Only a fraction of the nitrogen-based fertilizer applied is converted to plant matter, with the remainder accumulating in the soil. Some of this is lost as runoff water through irrigation or rainfall. Urea being water soluble, leaches into groundwater causing pollution. If nitrate levels are over 10mg/L, it can result in "blue baby syndrome".

Agricultural runoff can also lead to Eutrophication, where algae and other aquatic plants can flourish with the help of the nutrients, forming dense mats on the water surface called algal blooms. They block sunlight from reaching underwater plants and also deplete oxygen levels as they decay. This leads to hypoxic or anoxic (low or no oxygen) conditions, which harm or kill aquatic life. Fisheries, water quality, and bio-diversity are affected.

Yet another Environmental effect of fertilizers is the increase in soil acidity, as urea-based fertilizers release hydrogen ions. This leads to a decrease in nutrient availability, necessitating the addition of lime to the soil to bring back pH levels to acceptable limits.

Conclusion

From their humble origins in the dawn of civilization to their pivotal role in shaping the modern world, fertilizers stand as a symbol of humanity's unyielding drive towards sustenance and prosperity. However, it is not devoid of complexity and consequence. We have witnessed the fruits of this labor reaped in abundance, but have also witnessed the toll exacted upon our fragile ecosystems. In the delicate balance between progress and preservation, fertilizers occupy a pivotal space, one where the imperatives of food security must be balanced with the imperatives of environmental sustainability. It is a challenge that demands both innovation and enlightened stewardship and a steadfast commitment to both present and future generations.

Source : Team Chemical Market

Covestro Inaugurates New Production Plant for Polycarbonate Copolymers

- World's first production of Covestro using a solvent-free melt process for a wide range of polycarbonate copolymers
- Rapid market launch of new polycarbonate copolymers with customizable properties possible
- Wide range of applications, starting with the electrical/electronics and healthcare industries
- Investment in the mid double-digit million euro range

Covestro has finished its first plant for polycarbonate copolymers that can produce these high-quality plastics on an industrial scale at its Antwerp site in Belgium. The new platform technology, which the company developed itself, is based on an innovative, solvent-free melt process in combination with a new reactor concept. This makes polycarbonates with adjustable properties accessible, which have been developed and tested on a laboratory and pilot scale in recent years. The investment is in the mid double-digit million euro range and covers a pilot and a production plant.

In addition to the reduced complexity of the new production process, the connection to the existing infrastructure in Antwerp with four production lines for polycarbonate also has an advantageous effect, as it combines global scale in production with the flexibility of a standalone unit.

"The new production process is the first and only one of its kind in the world and enables us to offer a

broad portfolio of material innovations," says Sucheta Govil, Chief Commercial Officer at Covestro. "With the new plant, we can now produce and launch new polymer materials on an industrial scale much faster than before. This is the result of several years of development work by our research and process technology teams, as well as our long-term experience with polycarbonates. In our Solutions & Specialties segment, we focus on sophisticated products with a high pace of innovation, which is a key success factor since customer requirements change quickly. The new production line is a prime example of how we implement this strategy and support our customers to the best extent."

"Compared to pure polycarbonates, the copolymers open up new possibilites for us to integrate further functionalities and properties into our materials," explains Lily Wang, Global Head of the Engineering Plastics business unit. "These can range from improved mechanical properties, a higher resistance against chemical attack to an enhanced flame retardancy. By that, we can offer innovative materials that meet the high requirements of our customers in a wider range of applications. We will focus first on materials for the electrical, electronics and healthcare industries, while future innovations might focus on mobility and other trends." To understand its customers' needs, Covestro will showcase some of the products that could be produced with the new plant at the Chinaplas exhibition in Shanghai in April and looks forward to talking to customers about these innovative material solutions.

Source : Covestro

Toray Develops Durable Reverse Osmosis Membrane that Saves Water, Doubles Chemical Resistance, and Halves Replacement and CO2 Emissions

Tokyo, Japan, March 21, 2024 – Toray Industries, Inc., announced that it has developed a highly durable reverse osmosis (RO) membrane (see glossary note 1). This innovative offering guarantees the long-term provision of high-quality water. It also maintains the superior removal performance of Toray's existing membranes vital for reusing industrial wastewater and treating sewage.

The new membrane offers double the resistance to cleaning chemicals of conventional counterparts. This reduces performance degradation from membrane wear and simplifies operational management, halving replacement frequencies and shrinking the product's carbon footprint.

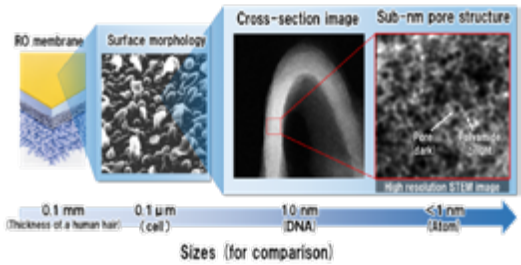
The company is preparing to mass produce this membrane and launch it in the rapidly expanding Chinese market in the first half of 2024. It looks to develop products with the new membrane for the global market including Japan.

The broad applications of RO membranes include desalinating seawater and river water, reusing wastewater, and producing drinking water as a technology to ensure sustainable water sources. Reusing wastewater entails treating water of diverse quality levels with RO membranes. The downside is that an increased reliance on cleaning chemicals to purge contaminants on the membrane surface to maintain their operational efficiency deforms their pores, diminishing removal performance. This has spurred demand for more resilient membranes.

The company combined a Toray Research Center-developed scanning transmission electron microscopy (glossary note 2) technology and a digital data analysis technique to quantitatively analyze the pore of the separation layer of RO membranes, which is smaller than one nanome-

ter (a billionth of a meter) in diameter. Toray drew on the analysis to identify a substructure that helps enhance pore structure stability when in contact with cleaning chemicals. It innovated a manufacturing process to design a new polymer structure, thus creating a RO membrane that delivers a stable pore structure.

Toray tested its new RO membrane at



a wastewater reuse plant to simulate harsh chemical cleaning conditions. The membrane proved effective in reducing deterioration in the quality of obtained water. This membrane should deliver an extended lifespan in such applications in sewage treatment and wastewater reuse facilities of chemical, steel, and dyeing plants requiring frequent chemical cleaning and in attaining zero liquid discharge (glossary note 3). This could potentially slashes carbon dioxide emissions by 50% associated with replacing and disposing of membranes. The company will establish a mass production system to supply products meeting customer needs. Toray will keep leveraging its core technologies of synthetic organic and polymer chemistry, biotechnology, and nanotechnology to innovate materials in keeping with its commitment to delivering new value and contributing to social progress.

Source : Toray

Green Science Alliance Developed Nail Polish Bottle Lid, Gel Nail Container, Cosmetic Container from Plant and Bamboo Charcoal (Biochar) based Materials

KAWANISHI, Japan, March 29, 2024 /PRNewswire/ -- Environmental problems caused by population explosion such as global warming, natural resource depletion, deforestation, water shortage and plastic pollution are getting severe in the world. Regarding plastic pollution, micro-plastics, nano-plastics are already in our human body and damaging our health. Therefore, plastic recycling, reduction of plastic usage itself, and biodegradable plastic application and development, are intensively carrying out. On the other hand, one of the reasons for global warming is said to be CO2 emission increase in the atmosphere. In this respect, compared to petroleum derived chemical products, plant biomass derived chemical products can be considered as carbon neutral because plants absorb CO2 during their growth and total CO2 emission will be 0 after they degrade after usage. Therefore, developing plant biomass derived biodegradable plastic is one way to reduce plastic pollution and CO2 emission.

The challenge of Green Science Alliance is to replace all the petrochemical derived chemical products with plant, nature biomass derived one and this concept is described in one of British chemical article, which is written by company CEO as Dr. Ryohei Mori.

https://pubs.rsc.org/en/content/articlelanding/2023/su/d2su00014h

Based on this concept, Dr. Ryohei Mori and his company have been developing plant, nature biomass based biodegradable resin, plastic, coating, glue, adhesive, plasticizer, lubricant, color ink, paint, etc., virtually trying to make every chemical product from plant biomass and not from fossil fuel, petroleum.

In addition, recently, the company has been developing various type of nail cosmetic products such as plant based biodegradable nail tips, plant based gel nails, water biomass based nail polish (with strong adhesion ability), 100% plant based nail polish, 100 % nail polish remover, and plant based glue for nail tips (a little weak adhesion compared to commercial one). They have been selling these products on their company E-commerce site, too.

https://en.nano-sakura-shop.com/shop

And this time, they have made plant based nail polish bottle lid (plant biomass content 99%, biodegradable), plant based gel nail container (plant biomass content 90%) and nail polish

EVENTS AND CONFERENCES

PAINTISTANBUL & TURKCOAT 2024

Date: May 08-10, 2024
City: Istanbul Expo Center (Istanbul Fuar Merkezi), Bakırköy/Istanbul, Turkey
Country: Turkey
Website: https://10times.com/turkcoat

Description: "International Exhibition of Coatings, Inks, Adhesives, Sealants, Construction Chemicals." Paintistanbul & Turkcoat is a significant event for the paint and coating industry, attracting exhibitors and visitors from various countries. It provides an opportunity to explore new products and services and to network with industry professionals.

CPHI CHINA - VIRTUAL CPHI

Date: June 19-21, 2024
City: Shanghai New International Expo Center
Country: China
Website: https://www.cphi.com/china/en/home.html

Description: This year's event saw the return of international attendees for the first-time post covid and was a huge success as we hosted thousands of pharma professionals from across the entire pharma supply chain in Shanghai. Excited for the next edition?

MIDDLE EAST COATING SHOW

Date: Apr 16-18, 2024
City: Dubai World Trade Centre
Country: Dubai
Website: https://www.middleeastcoatingsshow.com/

Description: With more than 29 years in the industry, the Middle East Coatings Show has established itself as the only trade event dedicated to the coatings industry in the Middle East. For three days, the trade exhibition facilitates serious business and networking opportunities for the coatings community. The event creates the perfect environment for manufacturers, raw materials suppliers, distributors, buyers and technical specialists like formulators from the coatings industry to meet face-to-face and do business. That's not all, the event offers the opportunity to gather insight on the latest processes, exchange ideas with industry leaders and build a strong network in the Middle East and North Africa.

DYE+CHEM BRAZIL INTERNATIONAL EXPO

Date: July 10 -12, 2024
City: Centro De Eventos PRO MAGNO, São Paulo, Brazil
Country: Brazil
Website: https://br.cems-dyechem.com/

Description: CEMS-Global USA's International `Dye+Chem series of Exhibitions has reached its accession in popularity in South & South-East Asia as the only kind of series held in the sub-continent. Being organized for more than a decade in Bangladesh, India & Sri Lanka; `CEMS-Global' is pleased to take this leading Series of Exhibition to Brazil and present the Brazilian edition - `44th Dye+Chem Brazil 2024 International Expo' to be held on similar successful model concurrently with

EVENTS AND CONFERENCES

`5th Brazil Apparel Sourcing Show 2024', 'Textech Brazil' and `5th Brazil Int'l Yarn & Fabric Sourcing Show 2024', focused to the colossal manufacturing Industry of Brazil. Brazil – is one of the `BRICS' economies and recently overtook the UK as the world's sixth-largest economy. Its economy is the largest of the Latin American nations and the second largest in the western hemisphere. Brazil is one of the fastest-growing major economies in the world. In future decades, Brazil is expected to become one of the five largest economies in the world. Brazil's place as a leader among the world's emerging economies was first brought to widespread prominence with its inclusion as one of the BRIC countries – the tag is given a decade ago to Brazil, Russia, India, and China because of their robust economic growth and tremendous market opportunity. In recent years, Brazil has fulfilled its promise and remains one of the world's top prospects for business development and investment. Brazil continues to enjoy steady economic growth and has the second biggest industrial sector in the Americas. The country's annual per capita GDP is US$ 12,000, almost doubled in the past two decades. Manufacturing sector dominates the Brazilian economy, contributing 67% and 30% of GDP, respectively. Brazil has steered a careful path to reach a position of global economic and industrial power. All these facts made CEMS-Global take its popular `Dye+Chem Series of Exhibition' to Brazil.

CHEM UK EXPO

Date: May 15 -16, 2024
City: NEC, Birmingham, UK
Country: UK
Website: https://www.chemicalukexpo.com/#:~:text=CHEMUK%202024%20Group%20Of%20Events,Chemicals%20Management%20Show%20Zone

Description: CHEMUK 2024 Group Of Events will return on the 15th & 16th May 2024 running in Hall 1 at the NEC, Birmingham. The expo will present 500+ specialist exhibitors and 150+ expert speakers split between four major show zones:

- Chemicals Supply Show Zone
- Chemicals Management Show Zone
- Process & Chemical Engineering Show Zone
- Chemical Laboratory Show Zone

EXPO PAINT & COATING

Date: June 27 - 28, 2024
City: Delhi,
Country: India
Website: https://expopaintcoating.in/

Description: Expo Paint & Coatings - 2024 is a comprehensive Paint & Coatings Exhibition providing platform to the needs of every facade of the coating industry right from raw materials, formulation, application, technology, finishing, quality assurance, recycling and disposal.

CHINA INTERDYE 2024

Date: Apr 17 - 19, 2024
City: Shanghai World Expo Exhibition and Convention Center, Shanghai
Country: China
Website: https://10times.com/china-interdye

Description: "China International Dye Industry, Pigments and Textile Chemicals Exhibition" China Interdye is a premier international show, conducted annually, for the Dyes and Dye Intermediates, Pigments and Textile Chemical industry. It is the perfect meeting point for the exhibitors to reach the global attendees and the perfect medium to know about the recent developments made in these industries.

remover and cosmetic container (plant biomass content 30 - 90%). The black color they used for the lid and container is the biochar or bamboo charcoal and not carbon black (black pigment made from petroleum). It should be mentioned here that biochar, bamboo charcoal made from plant or biomass resources are said to have CO2 storage and fixation ability, thus to reduce CO2 amount in the atmosphere. As such, they have succeeded in creating nail cosmetic content inside, and container outside, both from plant, biomass resources. One would not often see this type of chemical company who focuses on developing products as environmentally friendly as possible.

Source : Green Science Alliance Co., Ltd.

Clariant's CycloRetin™ : New Launch in the Skincare Market to Activate Ageless Beauty

- **Clariant unveils CycloRetin, a natural skincare active, ahead of in-cosmetics Global 2024 in Paris**
- **CycloRetin, derived from prince ginseng, offers gentler and equally effective benefits compared to traditional retinol**

MUTTENZ, March 26, 2024 - At in-cosmetics Global 2024 in Paris Clariant is debuting CycloRetin, a natural skincare active. Found in prince ginseng, CycloRetin activates the benefits offered by retinol while being naturally gentle.

CycloRetin's heterophyllin B molecule is a groundbreaking cyclic peptide that enhances skin matrix production, improving collagen and reducing signs of aging. With efficacy comparable to retinol and bakuchiol, CycloRetin supports youthful skin without compromise. Soluble in water and with minimal concentrations needed, it is eco-friendly. Showcased at in cosmetics 2024 are two formulations containing CycloRetin – Firming Mask and Mask Mist – offering efficient skincare.

Julie Droux, Global Technical Marketing Manager for Actives and Natural Origins, explains: "While exploring the benefits of cyclic peptides in our lab we discovered prince ginseng's outstanding potential to restart the skin matrix production cycle. Highly

effective even at low concentrations, peptides play a crucial role in supporting youthful skin appearance."

Source : Press Release

Sustainable, High Performing Systems and Additives for the Polyurethane Industry

- LANXESS at the UTECH Europe 2024 in Maastricht, MECC, booth F22
- More sustainable polyurethane systems enable reduced CO2 footprint
- Broad product range for demanding applications
- PU prepolymers for adhesives, sealants and OCF applications
- Flame retardants for foams
- Plasticizers for flexible PU applications
- Technical presentations on new modifiers and flame retardants

Specialty chemicals company LANXESS is presenting its extensive product portfolio for the polyurethane industry at UTECH Europe 2024. This includes novel, more sustainable and high performing polyurethane solutions and polyurethane additives such as flame retardants, modifiers, crosslinkers, plasticizers, catalysts and hydrolysis stabilizers. The trade fair will take place from April 23 to 25 in Maastricht, Netherlands, at the MECC congress and event center.

Adiprene Green: focus on sustainability
With the Adiprene Green product

line, LANXESS offers polyether-based polyurethane systems that contain renewable raw materials and can replace fossil-based products. Within its sustainability targets to become climate-neutral by 2040, the company has introduced new Adiprene Green products for polyurethane cast elastomer and adhesive applications.

In the area of cast elastomers, the Adiprene Green MDI and pPDI polyether prepolymers work as drop-in substitutes for conventional Adiprene products. Processed identically as other hot cast polyurethane elastomers, Adiprene Green's reactivity profile, demolding times and final properties are similar to fossil based polyether prepolymers. When cured with 1,4-butanediol, Adiprene Green MDI polyether prepolymers offer an excellent performance profile and a broad range of hardness from 80 Shore A to 60 Shore D. For outstanding performance conditions, Adiprene Green pPDI based systems are the ideal solution.

In addition, LANXESS is expanding its Adiprene Green brand to include adhesives, sealant and OCF (one component foam) applications. The new Adiprene Green prepolymers are suitable for hot melt applications. Their low free monomeric MDI (< 0.1 wt.%) content allows for safe working conditions and compliance with EU regulations, while decreasing CO2 footprint and maintaining high performance.

Hot cast/cold cure systems enable energy savings

A further solution for sustainable PU production is offered by LANXESS' hot cast/cold cure systems, which are available in both polyether and polyester versions.

Energy costs associated with typical cast PU processing operations are a significant expense within the overall cost of manufacturing polyurethane components. The new hot cast/cold cure system developed by LANXESS Urethane Systems is a recent initiative that enables PU processors to save energy and costs. This is possible due to the elimination of heat curing and post-curing steps needed in traditional polyurethane processing, thus contributing to production optimization and a lower carbon footprint.

Furthermore, the three component systems (ether and ester versions) have been chemically designed to give the PU processor full flexibility in the manufacture of a wide range of elastomers, delivering:

- a full hardness range from 60A to 55D (an external catalyst injection can be utilized if required),
- a practical pot life for each hardness, thus allowing adequate time to fill the mold,
- and an efficient demolding time to achieve good productivity.

Combining high performance and accessible cost

A high performing MDI-based polyurethane elastomer system was developed to address the technical requirements of demanding dynamic applications such as wheels and rollers. The target of this system is to offer a suitable and cost effective alternative to other more costly polyurethane systems, based on more expensive isocyanate grades. The MDI-based prepolymer counts upon two different curative options to reach elastomers with 75A and 94A hardness.

New prepolymer grades for adhesives, sealants and OCF applications

Moreover, LANXESS Urethane Systems have developed prepolymer grades with high NCO level and low viscosity for adhesives, sealants and OCF applications. These grades include low free MDI prepolymers with below 0.1 wt.% free monomer.

Flame retardants for foams

LANXESS offers a wide range of products for the polyurethane industry, including flame retardants such as the phosphorus-based brands Levagard and Disflamoll as well as the reactive, bromine-containing product PHT4 diol.

The Levagard brand products are particularly suitable for use in rigid and flexible polyurethane foams. New, innovative solutions for rigid foams can replace previous application configurations.

Phosphates from the Disflamoll product range can be used in many polyurethane applications. In the CASE (Coatings, Adhesives, Sealants, Elastomers) segment, they offer an excellent combination of flame retardancy and plasticizing properties.

Resistant to hydrolysis

PUR elastomers and thermoplastic polyurethanes (TPU) are established as high-quality materials in the footwear industry. The stabilizers in the Stabaxol range protect effectively against hydrolysis and extend the service life of the end products under moist or wet conditions. This opens up decisive competitive advantages and also enables new applications in higher quality segments. Good hydrolysis resistance is particularly important for everyday footwear and safety shoes, as well as ski and snowboard boots.

Due to their vibration-damping properties, polyester-based cellular PUR elastomers are used as additional spring-damper elements in almost all classes of motor vehicles. Stabaxol is used to prevent premature failure of these components due to ageing, which increases the service life of the entire suspension element.

Technically better and yet more cost-effective

The high-end modifiers in the Modulast

Booking price as on 15/04/2024		
Current Exchange rate-$1= 82.43 INR		
Chemicals	**Current Prices**	**Location**
Acetic Acid	440	CFR India
Acrylonitrile	1350	CFR India
Benzene	1055	CFR India
Phenol	1135	CFR India
Acetone	1180	CFR India
Butyl Acrylate Monomer	1485	CFR India
C9	1050	CFR India
LAB	1600	CFR India
IPA	1360	CFR India
Methanol	295	CFR India
VAM	940	CFR South Asia
Toluene	1055	CFR India
Styrene Monomer	1210	CFR India
N-Butanol	1160	CFR India
Octanol	1670	CFR India
Isobutanol	1190	CFR India
MEG	623	CFR India
Mix Xylene-Solvent Grade	1055	CFR India
Gycerine	750	CIF India
DMF	950	CFR India
Acrylic Acid	1050	CIF India
Formic Acid	770	CFR India
Adipic Acid	1400	CIF India
Ethylene	1005	CFR India
PTA	840	CFR India
Propylene	840	CFR India
THF	2100	CIF India
Note- All above booking prices have been directly collected from intenders and importers and verified.		

Mumbai Market Price as on 15/04/2024		
Name of Chemical	**Current Price**	**Location**
Acetic Acid-Imported Repack	46	Mumbai
Acetic Acid-Domestic Intact	56	Mumbai
Acetic Acid-Domestic Repack	46	Mumbai
Acetone-Imported Repack	110	Mumbai
Acetone-Domestic Intact	130	Mumbai
Acetone-Domestic Repack	110	Mumbai

Acetonitrile-Imported Intact	150	Mumbai
Acetonitrile-Domestic Intact	180	Mumbai
Acetonitrile-Domestic Repack	137	Mumbai
Acrylonitrile-Imported Intact	160	Mumbai
Acrylonitrile-Imported Repack	140	Mumbai
Aniline-Imported Intact	170	Mumbai
Aniline-Domestic Intact	180	Mumbai
Benzene-Domestic Repack	100	Mumbai
Cyclohexane-Imported Intact	150	Mumbai
Cyclohexane-Domestic Intact	125	Mumbai
Cyclohexane-Domestic Repack	118	Mumbai
Cyclohexanone-Imported Intact	145	Mumbai
Cyclohexanone-Imported Repack	135	Mumbai
Cyclohexanone-Domestic Intact	NA	Mumbai
Cyclohexanone-Domestic Repack	NA	Mumbai
C9 Solvent (99.99% purity)-Imported Repack	111	Mumbai
Dibutyl Phthalate-Domestic Intact	134	Mumbai
Dioctyl Phthalate-Domestic Intact	165	Mumbai
Ethyl Acetate-Domestic Intact	85	Mumbai
Ethyl Acetate-Domestic Repack	81	Mumbai
Formaldehyde(37%)-Domestic Repack	19	Mumbai
Methanol-Imported Repack	34	Mumbai
Methyl Ethyl Ketone-Imported Intact	130	Mumbai
Methyl Ethyl Ketone-Imported Repack	112	Mumbai
Methyl Isobutyl Ketone-Imported Intact	160	Mumbai
Methyl Isobutyl Ketone-Imported Repack	151	Mumbai
Methyl Methacrylate-Imported Intact	179	Mumbai
Mixed Xylene-Imported Repack	98	Mumbai
Mixed Xylene-Domestic Repack	98	Mumbai
Monoethylene Glycol-Imported Repack	57	Mumbai
Monoethylene Glycol-Domestic Intact	67	Mumbai
Monoethylene Glycol-Domestic Repack	57	Mumbai
Iso propyl Alcohol-Imported Repack	128	Mumbai
Iso propyl Alcohol-Domestic Intact	145	Mumbai
Iso propyl Alcohol-Domestic Repack	130	Mumbai
nButanol-Imported Repack	108	Mumbai
nButanol-Domestic Intact	117	Mumbai
nButanol-Domestic Repack	108	Mumbai
Ortho Xylene-Imported Repack	114	Mumbai
Phenol-Imported Repack	102	Mumbai
Phenol-Domestic Intact	107	Mumbai

Phenol-Domestic Repack	102	Mumbai
Phthalic Anhydride-Imported Intact	103	Mumbai
Phthalic Anhydride-Domestic Intact	103	Mumbai
Styrene Monomer-Imported Repack	120	Mumbai
Toluene-Imported Repack	97	Mumbai
Toluene-Domestic Repack	97	Mumbai
Vinyl Acetate Monomer-Imported Repack	91	Mumbai
Note-Above prices have been collected from experts and experienced outsources of the industry.Kindly verify from your end as well.		

International market prices as on 15/04/2024

Products	Regions	Current prices
Feedstock Prices $/unit		
Crude Oil ($/barrel)	WTI CRUDE	85.36
	BRENT CRUDE	90.23
	MARS US	77.67
	OPEC BASKET	90.62
Natural Gas	New York	1.75
Gasoline	RBOB	2.8
Heating Oil	US	2.68
Ethanol	US	1.64
Naphtha	FOB Singapore	690
	European	695
	CFR Far East Asia	705
Propane	New York	0.82
Aromatics prices $/MT		
Benzene	FOB Korea	1060
	CFR Japan	1070
Styrene	CFR Japan	1150
	CFR South East Asia	1180
	CFR China	1157
	FOB Korea	1140
Toluene	CFR China	930
	CFR South East Asia	1015
	FOB Korea	935
	CFR Japan	930
Iso-Mix Xylene	CFR South East Asia	955
	CFR Taiwan	980
	FOB Korea	960

MEG	CFR China	515
	CFR South East Asia	525
Methanol	CFR China	289
	CFR Korea	341
	CFR South East Asia	342
	CFR Taiwan	334
Solvent-MX	CFR South East Asia	1020
	FOB Korea	940
	CFR China	645
Ortho Xylene	CFR South East Asia	1070
	FOB Korea	1110
	CFR China	1070
Para Xylene	CFR South East Asia	1040
	FOB Korea	1020
	CFR Taiwan	1040
Propylene	FOB Japan	825
	FOB Korea	815
	CFR China	840
	CFR South East Asia	840
Propylene Glycol	FOB Korea	820
	CFR China	850
Ethylene	CFR North East Asia	925
	CFR South East Asia	1005
	FOB Japan	890
	FOB Korea	895
EDC	CFR Far East Asia	320
	CFR South East Asia	340
Butadiene	CFR China	1445
	CFR South East Asia	1415
	FOB Korea	1425
Benzene	FOB Rotterdam	1180
Methanol	FOB Rotterdam	316
Ortho Xylene	FOB Rotterdam	1455
Para Xylene	FOB Rotterdam	1135
Solvent-MX	FOB Rotterdam	1160
Styrene	FOB Rotterdam	1685
Toluene	FOB Rotterdam	1245
Benzene C/G	FOB US Gulf	407
Toluene C/G	FOB US Gulf	381
Styrene C/LB	FOB US Gulf	68
Para Xylene $/MT	FOB US Gulf	1110

Mix Xylene C/G	FOB US Gulf	381
Methanol C/G	FOB US Gulf	99
Intermediates prices $/MT		
Acrylonitrile	CFR Far East Asia	1290
	CFR South East Asia	1290
	CFR South Asia	1345
VCM	CFR Far East Asia	605
	CFR South East Asia	675
MTBE	FOB Singapore	1021
	FOB US Gulf	1025
Phenol	CFR China	900
	CFR South East Asia	985
	FOB US Gulf	1100
	FOB Rotterdam	1427
Acetone	CFR China	905
	CFR South East Asia	1025
	CFR Far East Asia	685
	FOB US Gulf	1367
	FOB Rotterdam	1237
Caprolactum	CFR Far East Asia	1690
	CFR South East Asia	1690
Caustic Soda	FOB North East Asia	335
	CFR South East Asia	400
Ethyl Acetate	FOB US Gulf	1631
	FOB Rotterdam	1357
	FD North West Europe(Euro/mt)	1350
Butyl Acetate	FOB US Gulf	2135
	FOB Rotterdam	2930
	FD North West Europe(Euro/mt)	2800
MEK	FOB Rotterdam	1552
	FD North West Europe(Euro/mt)	1530
IPA	FOB US Gulf	1433
	FOB Rotterdam	1302
	FD North West Europe(Euro/mt)	1300
NBA	CFR China	1055
	CFR South East Asia	1055
	CFR Far East Asia	1080
Octanol	CFR China	1345
	CFR South East Asia	1390
	CFR Far East Asia	1390

DOP	CFR China	1410
	CFR South East Asia	1465
	CFR Far East Asia	1375
Phthalic Anhydride	CFR China	1050
	CFR South East Asia	1070
	CFR Far East Asia	945
PTA	CFR Far East Asia	780
	CFR South East Asia	790
Acetic Acid	CFR Far East Asia	480
	CFR South East Asia	475
	CFR South Asia	440
	FOB China	370
VAM	CFR China	960
	CFR South East Asia	980
	CFR South Asia	940
Polymers prices $/MT		
PVC Suspension	CFR Far East Asia	740-760
	CFR South East Asia	740-770
ABS Injection	CFR Far East Asia	1300-1350
	CFR South East Asia	1320-1370

Shipping term		Description
FOB	Free on Board	The seller quotes a price including the cost of delivering goods to the nearest port. The buyer bears all the shipping expenses and is responsible to get the products from that port to its final destination. In simple terms, FOB price means the buyer has to bear the shipping costs completely. This is one of the most used shipping terms by international buyers and sellers.
EXW	Ex-Works	The seller has no involvement with the transportation costs and risks. The buyer has to collect the goods from the seller's site and get them to the final destination. All the costs and risks are borne by the buyer. It is advisable that the buyer purchases insurance since the goods can get damaged in transit. EXW is ideal when the buyer and seller are in the same country or region.
CFR	Cost and Freight	The seller pays the loading and freight costs from his premises up to the destination port. Then, the buyer has to arrange for the goods to be transported from the port to his premises. The seller is only responsible for the cost of shipping the products to the destination port. CFR is used for products transported by sea or inland waterways only. The seller does not bear the risk of loss or damage during transit.

Note-Above prices have been collected from experts and experienced outsources of the industry.Kindly verify from your end as well.

CIF	Cost, Insurance, and Freight	If the buyer opts for CIF price, the seller pays for the loading and freight costs right from his premises up to the destination port as well as insurance. In the case of damage or loss, the seller bears the risk completely. The buyer has to arrange for transportation of the goods from the port to his premises. CIF is a safer option than CFR since the goods are insured by the seller up to their arrival at the destination port.
DAP	Delivered at Place	It was previously known as DDU, Delivery Duty Unpaid. In this case, the seller is responsible for getting the goods from his own factory up to the premises of the buyer. He also bears the risk in the case of loss or damage of the goods right until the products are delivered to the buyer. The buyer only has to pay the import duties or custom clearance charges.
DDP	Delivery Duty Paid	The seller is responsible for shipping the goods from his factory to the destination address provided by the buyer, usually his factory or warehouse and is also liable for any damage or loss of goods during transit. The seller also takes care of the customs, VAT, or import duties levied on the products. The buyer only has to receive the products at the destination. In most cases, most sellers only offer DDP for small shipments.

FD North West Europe	**Free Delivered**	**Free Delivered North West Europe**		
Countries Groups	Southeast Asia is composed of eleven countries: Brunei, Burma (Myanmar), Cambodia, Timor-Leste, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand and Vietnam.	Far East Asia:The following countries are considered to be located in the Far East: China, Hong Kong, Macau, Japan, North Korea, South Korea, Mongolia, Siberia, Taiwan, Brunei, Cambodia, East Timor, Malaysia, Laos, Indonesia, Myanmar, Singapore, Philippines, Thailand, and Vietnam.	South Asia: The region consists of the countries of Afghanistan, Pakistan, India, Nepal, Bhutan, Bangladesh, the Maldives, and Sri Lanka	Northwestern Europe usually consists of the United Kingdom, the Republic of Ireland, Belgium, the Netherlands, Luxembourg, Northern France, Northern Germany, Denmark, Norway, Sweden, and Iceland.
Note- Last changed price means when it changed last whether its yesterday or 2 days ago or 5 days ago or depends on last changing.				

All of the above prices are provided by chemicalsupdates.com.
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Opening Ports Price (Rs/kg) of Chemicals as on 13/04/2024

USD Exchange Rate: 83.43 INR

Products	Current Prices (INR/kg)	Prices in USD/mt Equivalent to INR/ kg	Location
Acetic Acid	39	467.46	Ex-Mumbai
Acetic Acid	38.5	461.46	Ex-Kandla
Acetonitrile-imported intact	152	1821.89	Ex-Bhiwandi
Acetone	100	1198.61	Ex-Mumbai
Acrylic Acid	87	1042.79	Ex-Mumbai
Acrylonitrile	113	1354.43	Ex-Kandla
Adipic Acid	118	1414.36	Ex-Bhiwandi
Aniline Oil	164	1965.72	Ex-Kandla
Benzene	90	1078.75	Ex-Vizaz
Butyl Acetate	97	1162.65	Ex-Kandla
Butyl Acrylate Monomer	125	1498.26	Ex-Kandla
Butyl Glycol	148	1773.94	Ex-Kandla
C10	90	1078.75	Ex-Kandla
C9	88	1054.78	Ex-Kandla
Carbon Black-regular grade	60	719.17	Ex-Mumbai
Caustic Soda Lye	34	407.53	Ex-Dahej
Chloroform	11	131.85	Ex-Dahej
Citric Acid-ANHYD	70	839.03	Ex-Bhiwandi
Citric Acid-Mono	62	743.14	Ex-Bhiwandi
Cyclohexane	107	1282.51	Ex-Hazira
Cyclohexanone	124	1486.28	Ex-Kandla
DMF Drum	72	863.00	Ex-Bhiwandi
DEG	64	767.11	Ex-Hazira
EDC	29	347.60	Ex-Kandla
Epoxy Resin	185	2217.43	Ex-Nhava Sheva
Ethyl Acrylate	136	1630.11	Ex-Kandla
Formic Acid	65	779.10	Ex-Bhiwandi
Glycerine	59	707.18	CIF Nhava Sheva
N-Heptane	165	1977.71	Ex-Bhiwandi
Hexane	92	1102.72	Ex-Kandla
Hydrogen Peroxide-50%	32	383.56	Ex-Bhiwandi
Isobutanol	100	1198.61	Ex-Kandla
IPA	114	1366.41	Ex-Kandla
IPA	116	1390.39	Ex-Mumbai
LAB	134-136	Not Available	Imported
Maleic Anhydride-Drum	94	1126.69	Ex-Mumbai

MDC	26	311.64	Ex-Dahej
MEG	52	623.28	Ex-Mumbai
MEK	99	1186.62	Ex-Kandla
Melamine	85	1018.82	Imported
Methanol	27	323.62	Ex-Kandla
Methanol	27	323.62	Ex-Mumbai
MIBK	140	1678.05	Ex-Hazira
Mix Xylene-Solvent Grade	89	1066.76	Ex-Kandla
Mix Xylene-Solvent Grade	90	1078.75	Ex-Mumbai
MMA	173	2073.59	Ex-Hazira
N-Butanol	97.5	1168.64	Ex-Kandla
N-Propanol	97	1162.65	Ex-Kandla
Octanol	140-146	Not Available	Ex-Kandla
Ortho Cresol	160	1917.78	Ex-Bhilai
Ortho Xylene	98-100	Not Available	Ex-Kandla
Phenol	95	1138.68	Ex-Kandla
Phenolic Resin	152	1821.89	Ex-Indore
Phthalic Anhydride	102	1222.58	Ex-Mumbai
Propylene Glycol	99	1186.62	Ex-Kandla
Sodium Nitrate (50Kg Bag)	61	731.15	Ex-Make-Lasons
Soda Ash Light	34	407.53	Ex-Bhiwandi
Styrene Monomer	107.5	1288.51	Ex-Kandla
Styrene Monomer	110	1318.47	Ex-Mumbai
Sulphuric Acid	4	47.94	Ex-Vapi
Tio2 (Anatase Grade)	190	2277.36	Ex-Bhiwandi
Tio2 (Rutile Grade)	225	2696.87	Ex-Bhiwandi
Toluene	88	1054.78	Ex-Kandla
Toluene	90	1078.75	Ex-Mumbai
VAM	80	958.89	Ex-Kandla
VAM	83	994.85	Ex-Hazira

Producer Prices (Rs/kg) of Chemicals as on 15/04/2024

Producers	Current Price (Rs/kg)	Import parity price in USD/MT	Location	Production capacity
Reliance-Toluene	82.5	988.85	Ex-Jamnagar	100,000 tonnes/ year
Reliance-Mix Xylene	85	1018.82	Ex-Jamnagar	120,000 tonnes/ year
Reliance-MEG	54.9	658.04	Ex-Jamnagar	750,000 tonnes/ year

Reliance-DEG	64.2	769.51	Ex-Jamnagar	65,000 tonnes/ year
Reliance-TEG	118.5	1420.35	Ex-Jamnagar	NA
Reliance-LAB	145	1737.98	Ex-Vadodra	180,000 tonnes/ year
Reliance-PTA	81.1	972.07	Ex-Dahej Gujarat	1,300,000 tonnes/year
IOCL-LAB	145	1737.98	Ex-Gujarat	120,000 tonnes/ year
IOCL-MEG	52	623.28	Ex-Odisha(Paradip)	
IOCL-MEG	53	635.26	Ex-Panipat	
IOCL-DEG	61.1	732.35	Ex-Odisha(Paradip)	
IOCL-DEG	62.8	752.73	Ex-Panipat	
IOCL-Banzene	88	1054.78	Ex-Vadodara Gujarat	
IOCL-Paraffin Wax	110	1318.47	Ex-Delhi	
Deepak Pheno-lics-Phenol	92.5	1108.71	Ex-Dahej Gujarat	200,000 tonnes/ year
Deepak Phenolics-Ac-etone	96	1150.67	Ex-Dahej Gujarat	80.5
Deepak Phenolics-IPA	115	1378.40	Ex-Dahej Gujarat	30,000 tonnes/ year
HOCL-Phenol	114	1366.41	Ex-Kochi	40,000 tonnes/ year
HOCL-Acetone	108	1294.50	Ex-Kochi	24640 tonnes/ year
SI GROUP-Phthalic Anhydride	99	1186.62	Ex-Navi Mumbai	11000 tonnes/ year
Andhra Petrochemi-cals-Octanol	149	1785.93	Ex-Vishakhapatnam	70,000 tonnes/ year
Andhra Petrochemi-cals-N-Butanol	100	1198.61	Ex-Vishakhapatnam	30,000 tonnes/ year
Andhra Petrochemi-cals-Iso-Butanol	102	1222.58	Ex-Vishakhapatnam	4000 tonnes/year
BASF-Adipic Acid	130	1558.19	Imported	210,000 tonnes/ year
NIRMA-LAB	142	1702.03	Ex-Vadodra	120,000 tonnes/ year
TATA Chemicals-Soda Ash light	35	419.51	Ex-Bhiwandi	900,000 tonnes/ year
GNFC-Acetic Acid	40	479.44	Ex-Bharuch Gujarat	160,000 tonnes/ year
GNFC-TDI Drum	202	2421.19	Ex-Bharuch Gujarat	67000 tonnes/ year
GNFC-Aniline Oil	159	1905.79	Ex-Bharuch Gujarat	

BPCL-Benzene	89	1066.76	Ex-Mumbai	90,000 tonnes/ year, Mumbai Refinery,
BPCL-Toluene	85.1	1020.02	Ex-Mumbai	16,000 tonnes/ year
BPCL-Hexane (KL)	96.8	1160.25	Ex-Mumbai	35,000 tonnes/ year, Kochi
BPCL-Hexane (MT)	145.8	1747.57	Ex-Mumbai	35,000 tonnes/ year, Kochi
BPCL-MTO (KL)	84.8	1016.42	Ex-Mumbai	19,000 tonnes/ year
BPCL-Paraffin Wax	110	1318.47	Ex-Delhi	
BPCL-Sulphur (Molten)	10.8	129.45	Ex-Mumbai	19,000 tonnes/ year
BPCL-Acrylic Acid (B)	78.1	936.11	Ex-Kochi	47000 tonnes/ year
BPCL-Acrylic Acid (P)	87.1	1043.99	Ex-Kochi	
BPCL-2-Ethyl Hexanol (B)	141.5	1696.03	Ex-Kochi	47000 tonnes/ year
BPCL-2-Ethyl Hexanol (P)	152	1821.89	Ex-Kochi	
BPCL-N-Butanol (B)	95.5	1144.67	Ex-Kochi	38000 tonnes/ year
BPCL-N-Butanol (B)	98	1174.64	Ex-Kandla	
BPCL-N-Butanol (P)	112.5	1348.44	Ex-Kochi	
BPCL-Iso-Butanol (B)	97.5	1168.64	Ex-Kochi	7000 tonnes/year
BPCL-Iso-Butanol (P)	106.5	1276.52	Ex-Kochi	
BPCL-Butyl Acrylate (B)	120.5	1444.32	Ex-Kochi	180000 tonnes/ year
BPCL-Butyl Acrylate (B)	123	1474.29	Ex-Kandla	
BPCL-Butyl Acrylate (P)	130.5	1564.19	Ex-Kochi	
BPCL-2-Ethyl Hexyl Acrylate (B)	152.7	1830.28	Ex-Kochi	10000 tonnes/ year
BPCL-2-Ethyl Hexyl Acrylate (P)	162.7	1950.14	Ex-Kochi	
Grasim-MDC	25	299.65	Ex-Gujarat	33000 tonnes/ year
Meghmani-MDC	25	299.65	Ex-Ankleshwar Gujarat	397500 kg/month
GACL-MDC	25.25	302.65	Ex-Bharuch Gujarat	NA
GNFC-Ethyl Acetate	74	886.97	Ex-Bharuch Gujarat	50000 tonnes/ year
Accord-Ethyl Acetate	70	839.03	Ex-Maharashtra	

Jubilant-Ethyl Acetate	70	839.03	Ex-Maharashtra	280 tonnes/day
Laxmi-Ethyl Acetate	71.5	857.01	Ex-Maharashtra	100000 tonnes/ annum
Meghmani-Caustic Soda Lye	33.25	398.54	Ex-Bharuch Gujarat	400000 tonnes/ annum
GACL-Caustic Soda Lye	33.25	398.54	Ex-Dahej Gujarat	
Reliance-Caustic Soda Lye	33.25	398.54	Ex-Gujarat	69500 tonnes/ annum
GSFC-Cyclohexane	105	1258.54	Ex-Gujarat	NA
Note-Above prices have been collected from experts and experienced outsources of the industry. Kindly verify from your end as well. Above prices are Exclusive of GST				
Note- Last changed price means when it changed last whether its yesterday or 2 days ago or 5 days ago or depends on last changing.				

New Chemical Products Listed on Chemical Market Leads Platform

FULLY REFINED PARAFFIN WAX / 27129090 / NRL/CPCL/IOC

CAS-Number :

Molecular Formula :-

Molecular Weight :- mol/g

Available Qty :- 1000.0000 Kgs

Package Size :- 25 kg bag

Price :- Available on Request

Markets :- Surfactants | Personal Care / Cosmetics | Paints & Coatings | Catalysts | Plastics/Polymers | Oils Refinery and Petrochemicals | Specialty Chemicals | Dyes and Pigments | Oleochemicals | Rubber & Resins | Construction Chemicals | Inks and Printing | Solvents | Lubricants | Additives | Soap & Detergents | Paper Industry | Textile Industry | Industrial Chemicals |

GLYCERYL MONO STERATE (GMS) / 29157030

CAS-Number :-

Molecular Formula :-

Molecular Weight :- mol/g

Available Qty :- 1000.0000 Kgs

Package Size :-25 kg

Price :- Available on Request

Markets :- Surfactants | Personal Care / Cosmetics | Paints & Coatings | Catalysts | Plastics/Polymers | Oils Refinery and Petrochemicals | Specialty Chemicals | Dyes and Pigments | Oleochemicals | Rubber & Resins | Construction Chemicals | Inks and Printing | Solvents | Lubricants | Additives | Soap & Detergents | Paper Industry | Textile Industry | Industrial Chemicals |

STEARIC ACID / 38231100 / SHEEL CHAND / GODREJ/JOCIL

CAS-Number :-

Molecular Formula :-

Molecular Weight :- mol/g

Available Qty :- 1000.0000 Kgs

Package Size :- 50 Kg / 25 Kg Bag

Price :- Available on Request

Markets :- Surfactants | Personal Care / Cosmetics | Paints & Coatings | Catalysts | Plastics/Polymers | Oils Refinery and Petrochemicals | Specialty Chemicals | Dyes and Pigments | Oleochemicals | Rubber & Resins | Construction Chemicals | Inks and Printing | Solvents | Lubricants | Additives | Soap & Detergents | Paper Industry | Textile Industry | Industrial Chemicals |

BITUMEN / 27130000 / LOCAL

CAS-Number :-

Molecular Formula :-

Molecular Weight :- mol/g

Available Qty :- 1000.0000 Kgs

Package Size :- Bag /Drum

Price :- Available on Request

Markets :-Surfactants | Personal Care / Cosmetics | Paints & Coatings | Catalysts | Plastics/Polymers | Oils Refinery and Petrochemicals | Specialty Chemicals | Dyes and Pigments | Oleochemicals | Rubber & Resins | Construction Chemicals | Inks and Printing | Solvents | Lubricants | Additives | Soap & Detergents | Paper Industry | Textile Industry | Industrial Chemicals |

range offer outstanding technical advantages in both thermoplastic polyurethanes (TPU) and CASE applications. But it is not only the physical properties of these materials that can be optimized. Their production is also more cost-effective, as the proportion of polyols and isocyanates in the formulations can be significantly reduced. This substantially reduces the overall raw material costs.

Modulast PUR is a high-purity dibenzoate with a low hydroxyl content and therefore meets the market requirements of the PU industry. The modifier ensures exceptional coloration of the end product, low odor and improved elasticity properties. Modulast PUR can be used as a partial substitute for polyols in formulations.

The high-performance modifier Modulast ACE is characterized by its consistently low hydroxyl content. It is used in high-performance applications where low odor, extremely low exudation and low compression set are required.

Plasticizers for flexible polyurethane applications

LANXESS has a wide range of plasticizers that can be used in plastics, but also in polyurethane applications. As a phthalate-free plasticizer, Mesamoll is particularly suitable for flexible polyurethane sealants and adhesives that are expected to have a long service life, especially when in contact with concrete and moisture. Thanks to its high resistance to saponification, Mesamoll makes it possible to produce 1K and 2K polyurethane-based sealants and adhesives with a long service life.

Technical presentations by LANXESS experts

During the event, two application development experts from LANXESS will provide detailed information on new additives for the polyurethane sector. Dr. Gizem Cinar will present "New dibenzoate-based modifiers for polyurethane systems" (April 23, 2:15 pm, Auditorium 2) and Dr. Heiko Tebbe will explain the use of "Reactive phosphorus based flame retardants for rigid polyurethane foams" (April 24, 11:00 am, Auditorium 2).
Source : Lanxess

Givaudan Active Beauty Launches Illuminyl™ 388, a Highly Potent Skin Brightening Prebiotic Paving the Way for Inclusivity

13 MAR 2024 · 07:30 CET Givaudan Active Beauty unveils Illuminyl™ 388, a biotech-enhanced molecule designed through cell-free glycosylation to address the challenges of skin pigmentation for all skin types.

Crafted through a unique biocatalysis process from EGCG1, green tea's most iconic antioxidant, this ingenious brightening molecule delivers a holistic luminous effect.

At the heart of Illuminyl™ 388 is a commitment to inclusivity in skincare innovation.

This bio-based active has been designed to simultaneously target multiple skin pigmentation pathways and is reinforced by additional prebiotic activity to meet the needs of diverse skin types from Africa, Asia, India, and Europe.

Givaudan Active Beauty undertook in-depth and global clinical studies, engaging over 200 volunteers comprised of four diverse skin tones (African, Asian, Indian, and Caucasian), in turn establishing that Illuminyl™ 388 is able to:

- improve skin radiance in just 2 weeks,
- enhance skin tone & luminosity in just 2 weeks,
- reduce pigmentation spots in just 1 month,
- enhance skin tone homogeneity, even tackling stubborn age spots.

Illuminyl™ 388 has a unique bioavailability with an in-depth skin penetration profile. Its sugar moiety enables its absorption via cellular glucose receptors, while conferring on the molecule a prebiotic activity which stimulates the in-situ release of a niacin-derivative by the skin microflora.

"Clinical studies conducted on four different skin types underline the universal efficacy of this skin illuminating active. Givaudan Active Beauty continues to push the boundaries of innovation with Illuminyl™ 388: we are not only targeting all the major pigmenta-

tion pathways but we also trigger the skin microbiota to produce whitening post-biotics. Whether it's improving skin radiance and luminosity, promoting even skin tone, or reducing pigmentation spots, Illuminyl™ 388 outperforms traditional benchmarks such as vitamin C. It is a testament to our commitment to redefining beauty standards and empowering individuals worldwide."

Daniel Auriol, Scientific Director Biotechnology, Active Beauty

Achieving a B-Biome™ Score2 of 'B', this brightening active works in synergy with the microbiome to preserve the general balance of the skin's microbiota.

To learn more about our new ingredient and its marketing concept, S3D® Lumière Noire, we invite you to visit us at our booth (1C62) at in-cosmetics Global, taking place in Paris, France. Or connect to uxbeauty.givaudan.com, our digital platform dedicated to cosmetic ingredients.

Source : Givaudan

ResourceWise Launches ChemEdge360, Market Intelligence for the Chemicals Industry

CHARLOTTE, N.C., March 21, 2024 /PRNewswire/ -- ResourceWise is excited to introduce ChemEdge360, the latest advancement in market intelligence platforms for methanol, glycols, and solvents. ChemEdge360 skillfully blends current and past price data with thorough market analysis, providing producers, intermediaries, and end users with the insights they need to make decisions. Rooted in a legacy of market intelligence established by Houston-based Chemical Intelligence, ChemEdge360 represents ResourceWise's continued dedication to customer success in the chemicals, forest products, and renewable fuels industries.

"The future of the chemical sector depends on timely, accurate, and strategic data and insights," stated George West, founder of Chemical Intelligence, now part of ResourceWise. "ChemEdge360 is designed to be that forward-looking guide, enabling informed decision-making in an industry we've served for over a quarter-century. The new platform will include all the same data and information contained in the current PDF reports and allow users to create custom pages to access the data they need faster," said West.

Data Enriched Features

Designed to put the latest chemical market intelligence right at your fingertips, ChemEdge360 includes:

- **Current and Historical Prices:** Track the latest trends and historical patterns to inform your buying or selling decisions.
- **Expert Insights:** Leverage in-depth analysis from industry veterans to contextualize data, making it actionable.
- **Real-Time Alerts:** Stay informed of critical developments such as plant outages and price announcements that can affect your business operations directly.
- **Global Trade Flow:** Understand the movement of chemicals globally to identify new markets and sources.
- **Global Plant Capacities:** Gain insight into worldwide production capabilities, helping you anticipate changes in supply and demand.
- **Macroeconomic Indicators:** Measure the impact of broader economic factors on the chemical industry to stay ahead of market shifts.

Pete Stewart, the CEO of ResourceWise, is focused on the future. "Our goal goes beyond the traditional feedstocks for methanol, glycols, and solvents," said Stewart. "We cover biomethanol pricing trends and feedstocks closely. We'll also keep you abreast of the progress being made in more sustainable, lower-carbon pathways like bio-bunkering and sustainable aviation fuels." Subscribers use ChemEdge360 to develop production strategies, make pricing decisions, capitalize on market opportunities, mitigate risks, navigate market fluctuations, and optimize their procurement processes.

"We are committed to empowering businesses with the tools they need to stay ahead," added West. "Whether you're a large corporation or small business, a product manager or purchasing executive, our platform is designed to be your ally in achieving success." ChemEdge360 can be used to bridge information gaps and enhance subscribers' ability to maintain a competitive edge in volatile markets. The new platform is now accessible to industry professionals seeking a robust, data-driven approach to identify market trends and growth opportunities.

Source : ResourceWise

Shin-Etsu Chemical develops industry's first water-based, fast-curing silicone resin

Shin-Etsu Chemical Co., Ltd. (Headquarters: Tokyo; President: Yasuhiko Saitoh) has developed the industry's first* silicone resin that does not use emulsifiers — the water-based, fast-curing silicone resin "KRW-6000 Series."

Silicone resins are used in such applications as paints and coatings because of their excellent performance with regard to weather resistance and heat resistance. In recent years, expectations for water-based silicone resins have been increasing.
Conventional waterborne silicone resins use emulsifiers. Compared to organic solvent-based silicone resins, water-based products to which emulsifiers are added tend to have inferior film properties. In addition, there were issues regarding the required time for drying and curing. The KRW-6000 Series does not use emulsifiers, and thus it has excellent film properties and can be cured quickly through heating. The main features of this newly developed silicone resin series are as follows:

1. Emulsifier-free, water-dispersible silicone resin

Because no emulsifier is used, it forms a superior water-resistant film. In addition, after curing, it becomes an inorganic silicone-only film, which provides excellent durability and weather resistance over the long term. For this reason, it is suitable as a binder for weather-resistant paints and various additives.

2. Non-inclusion of organic solvents contributes to a VOC (Volatile Organic Compounds)-free product

This resin is a water-solvent type that does not contain organic solvents, and the only substance generated in the curing reaction is water, which contributes to VOC-free products. In addition, the water evaporates to form a film with no tackiness, making it easy to work with.

3. Fast-curing at low temperatures in a short time contributes to the reduction of greenhouse gas emissions
In addition to the curing process progressing at room temperature, curing is accelerated by heating to the 80-150°C level for several minutes. Compared to conventional organic solvent-based silicone resins, curing progresses at lower temperatures and in a shorter time, thus contributing to the reduction of greenhouse gases.

4. Formation of high-hardness film

It is possible to form a high-hardness film with a maximum hardness of 4H. Types with more flexible coatings are also available. Shin-Etsu Chemical will strive to develop and supply high-value-added silicone products that take advantage of the technological expertise and know-how Shin-Etsu has cultivated over the years in order to help our customers solve various issues, as we continue our efforts to contribute to the realization of a sustainable society.

Source : Shin-Etsu

BASF India, Somaiya Vidyavihar (SVV) and Indian Chemical Council (ICC) Celebrate Success of Inaugural Batch of We-Chemie Program, Empowering Women in Chemistry

Inaugurated in Nov 2023, We-Chemie is designed for girl students from underprivileged backgrounds studying in the final year of BSc and MSc Chemistry or Chemical Sciences

Mumbai, India April 11, 2024: BASF in collaboration with Somaiya Vidyavihar (SVV), and the Indian Chemical Council (ICC) celebrate the success of the inaugural batch of We-Chemie program - Women Enabled for Careers in Chemistry, recognising students who have completed the training. With less than 30% women representation in the global chemical sector, and probably much lower in India, BASF spearheads this CSR initiative in partnership with SVV and ICC to bridge the gender gap in the industry.

The We-Chemie program endeavours to foster a pipeline of skilled female graduates and postgraduates from underprivileged backgrounds, empowering them to pursue rewarding careers in the chemical industry. Along with the training, it provides participants with essential knowledge, mindset, and skills for success incorporating a mix of industry visits, mentorship, and

self-development programs. The presentation ceremony was graced by dignitaries from the Indian chemical industry, academia, and other participating organizations, where over 40 students in the age group of 20-23 years across Maharashtra received their certificates.

Mr. Alexander Gerding, Managing Director, BASF India Limited & Head - BASF Group Companies in India, said, "As pioneers in promoting diversity and empowerment within the chemical industry, We-Chemie offers transformative opportunities to aspiring women graduates from economically marginalized backgrounds. This milestone marks not only the culmination of their intensive training but also the beginning of their promising careers in the dynamic field of chemistry. We are committed to championing diversity, empowerment, and excellence within the chemical industry and and look forward to expanding this initiative across the nation."

Speaking at the event Mr. Samir Somaiya, President-Somaiya Vidyavihar and Chancellor, Somaiya Vidyavihar University said, "As we celebrate the successful conclusion of the inaugural batch of We-Chemie, I am filled with immense pride and hope. This program, a pioneering step towards empowering women in the field of chemical sciences, reflects our commitment to inclusivity and excellence. It is heartening to see these bright, determined women ready to make their mark in the chemical industry. This initiative embodies our mission to create opportunities for all and foster a culture of innovation and leadership."

Mr. Sothi Selvam, Director General, Indian Chemical Council highlighted, "As the apex national body representing the chemical and petrochemical industry in India, ICC is delighted to be associated with the We-Chemie project. We will continue to spearhead the employability aspect, facilitating job placements and internships for the trained women, through our member companies and the ICC's Industry Academia Expert Committee. Further, We-Chemie aligns very well with India's new National Education Policy (NEP) and the UN sustainable Development Goals emphasizing our commitment to fostering industry-academia partnerships and enhancing employability."

Source : BASF

Hamee Corp's HIGHER Smartphone Covers Now made with Elastollan® N, a Bio-Based Thermoplastic Polyurethane

- **Optimized with enhanced UV resistance and superior anti-yellowing properties**

Tokyo, Japan – March 19 – BASF's Elastollan® N, a bio-based thermoplastic polyurethane (TPU) with a bio-based content of 53%, is now used for the production of Hamee Corp's (Location: Odawara-City, Kanagawa Prefecture, President & CEO: Ikuhiro Mizushima) new 'HIGHER' range of smartphone covers. While maintaining the excellent durability and transparency of TPU's excellent features, the bio-based version has been further optimized with enhanced UV resistance and anti-yellowing properties.

"Following the success of the previous series, we launched this bio-based version to meet the demand from environmentally conscious consumers. This is not only the first time we have used bio-based material in our smartphone cover, but also HIGHER's first MagSafe-compatible cover," said Tomoyuki Matsuda, Product Development Department, Hamee Corp.

Since its launch in 2021, the HIGHER smartphone cover has achieved a cumulative total of more than 60 SKUs (Stock Keeping Unit).

"We are delighted and proud to have once again been chosen as material partner for Hamee's latest smartphone case and to have helped them develop their new product. Together, we are accelerating the plastics journey with high-performance and sustainable material solutions such as Elastollan N," said Rachib de Matos Zeidam, Business Management, Performance Materials, BASF Japan Ltd.

Hamee Corp's new 'HIGHER' range of smartphone covers will be exhibited at CHINAPLAS 2024. At CHINAPLAS 2024, BASF will showcase its latest innovations, competencies, and developments – particularly in the areas of sustainability and co-creation. BASF at CHINAPLAS 2024: Hall 7.2 Booth C42, National Exhibition and Convention Center (Shanghai)

Source : BASF

Water-Based Paints Vs Solvent-Based Paints what should you choose

The world is looking for opportunities to reduce the environmental impact and looking for ways to adopt sustainable manufacturing practices. What is the latest trend in the paints industry? You may ask. Well, there is a huge transition taking place in the paint industry and it is remarkable. Water-based paints are becoming the new standard and addition to that line of bringing sustainable products. The solvent-based coatings are more hazardous and less beneficial too. Thus the transition to water-based paints has become the most crucial step in healing the global environment. This article is all about how the industrial sectors are moving towards water-based paints and how India has made necessary efforts towards it. We have also discussed about India's first water-based paint thus let's begin.

The massive transition of Indian paint companies:

If you haven't heard of this news, here you go! Indian companies are in this massive transition from solvent-based paints to water-based paints. This phase of transition is backed by so much passion towards their goal to balance sustainability and performance.

It is not very often that we hear that sustainable products offer much performance, but these water-based paints are overtaking the solvent-based conventional paints in performance. Water-based paints can be used on a variety of surfaces such as wood, metal and plasters. Overall they can be used in areas where the traditional oil-based paints are recommended and not to be used in the areas where the oil-based paints are not.

Although there are a few drawbacks with water-based paints in comparison to solvent-based ones, such as desirable coatings, might not be suitable for heavy-duty applications and smooth and glossy finishes, these water-based paints are still hugely adopted for several projects.

For over 20 years now, government regulators have been bringing in stringent regulations in terms of compounds used in solvent-based coatings. The VOC substances that are present in these solvent-based coatings are highly toxic to both human health and the environment. The restrictions in the usage of VOC substances across these paints further drive the growth of water-based paints.

JSW Paints launched the Aquaglo range as India's first water-based paints for wood and metal surfaces:

This new launch in India focuses on consumers' health and is suitable for consumers with specific health conditions. The solvent-based paints tend to pollute the environment with their unhealthy fumes post-application and they are not a healthier option for the environment too. Therefore consumers who are highly conscious about environmental wellness are inclined towards this Halo Aquaglo range.

JSM paints have incorporated Zn2+ ion technology into the formulation to add more impact on the anti-microbial properties. Now, these ions tend to release gradually over time after the paint application, which possesses antimicrobial properties.

On the other hand, when the paint is applied on the designated surface, these zinc ions act as a deterrent to microbial growth as they interrupt the cellular processing of microbes such as bacteria, fungi, mould and so on. Therefore these microbes lose their potential to thrive and reproduce.

Additionally, the germ Block Zn2+ technology carries forward the same efficacy throughout remains intact on the target surface and works well over the years. Therefore, it ensures a safe environment for the residents, especially highly beneficial for consumers who are allergic to respiratory irritants and those who possess immunity-related conditions.

To speak about its performance, there is no compromise in terms of aesthetics and performance. Overall this water-based paint delivers superior and durable protection to any kind of surface.

Key benefits to consider: Water-based paint- Perfect for exterior use:

Water-based paints perform very well on exterior applications and they are more resistant to UV rays and stay in place for longer periods. The flexibility factor moves the substrate here and there according to the changing weather conditions, especially when it adapts to the changing weather conditions, making it work well for exterior applications. Whereas the oil-based paints break down quickly in UV light and develop a chalky appearance as there is no flexibility in it, thus it don't expand or contract rather they crack.

Conclusion: Paints should be chosen based on the requirements of the project, however, changing regulations and increasing awareness among consumers are stimulating the growth of the water-based paints. Hence we immensely appreciate the JSM paints for introducing the first, safe, water-based paint that is compatible with varied surfaces.

Vinodini Harish