

Prices start spiralling as US Gulf Coast storm leads to widespread outages...

The US Polar storm has resulted into widespread outages in the Gulf Coast region and has started creating supply disruptions. Our channel checks are indicating steep rise in some of the chemicals on MoM basis. Though, it is difficult to predict how long these spikes would last, it is likely to benefit/impact some of the companies in the near-term. The key highlights from our checks are as follows.

Supply disruption in global market is driving TDI and MDI prices by 17.1% and 4.8% MoM. ABS and Polystyrene prices continue to remain elevated (rose 1.9% and 41.3% MoM) led by supply constraints and high raw material prices.

Phenol prices rose sharply by 72.3% MoM led by global supply chain disruption. During last fortnight, Phenol spreads rose by 7.8% to US\$ 761/MT. Average spreads for 4Q'21 are now up 10.9% YoY while it is still down 17.6% QoQ to US\$ 636/MT. Average spreads for FYTD21 are up 53.0% YoY to US\$ 796/MT.

BoPET and BoPP prices rose 4.5% and 16.4% MoM on account of increase in raw material prices and supply constraints.

Refrigerant prices inched upward in the range of 1.8% to 2.4% MoM on account of healthy demand and increase in raw material prices. VAM prices continue to inch upward (up 76.2% MoM) led by disruption in global supply chain.

DASDA prices corrected by 12.5% MoM led by easing supply from China while Optical Brightener prices continued to remain soft led by subdued demand. Vinyl Sulphone prices rose 16.3% MoM led by raw material shortage while H-Acid prices remained flat MoM.

Chemicals	Jan 21	Feb 21	МоМ (%)	Companies having exposure
Vinyl Acetate Monomer	105	185	76.2	Pidilite Industries (RM)
Phenol	65	112	72.3	Deepak Nitrite
Acetic Acid	57	90	57.9	GNFC
Acrylonitrile	126	185	46.8	Vinati Organics (RM)
Polystyrene	92	130	41.3	Supreme Petro, INEOS Styrolution
Acetone	61	86	41.0	Deepak Nitrite
Aniline	110	150	36.4	GNFC
Iso Propyl Alcohol	80	108	35.0	Deepak Nitrite
Styrene	88	113	28.4	Raw Material For Bhansali, Supreme Petro, INEOS, Apcotex
Phthalic Anhydride	85	100	17.6	IG Petro Chemicals and Thirumalai Chemicals
TDI	175	205	17.1	GNFC
BOPP	140	163	16.4	SRF
Vinyl Sulphone	215	250	16.3	Bodal, Shree Pushkar, Bhageria, Kiri
Caustic Soda Flakes	28	30	7.1	Gujarat Fluoro, GACL, Meghmani Organics, Atul
MDI	210	220	4.8	BASF
BOPET	112	117	4.5	SRF
ABS	270	275	1.9	INEOS Styrolution, Bhansali Engin.

1

Chemical Price Movement



US chemical plants outages led by Polar storm

Company name	Plant locations	Products				
Braskem	Point Comfort/Baton Rouge, Louisiana	PP				
	La Porte, Freeport, Seadrift,	Polypropylene				
	Port Arthur					
Chevron Phillips	Sweeny	Cracker, HDPE				
	Cedar Bayou					
Dow	Freeport and La Porte, Deer Park St. Charles, Louisiana Texas City	MMA, VAM, MDI, PO, PG				
	Plaquemine, Louisiana	PO, PG				
	Freeport	Ethylene, Propylene				
Eastman	Longview	Olefins, EO, EG				
	Baytown	Ethylene, Propylene, Benzene, Base oil groups I & II, MX, OX				
ExxonMobil	Beaumont	Gasoline, Ethylene, Propylene, Refined products, Benzene, PX, LDPE				
	Texas and Louisiana	PP & PE				
Flint Hills	Corpus Christi	Benzene, propylene				
Formosa Plastics Corporation USA	Point Comfort	Ethylene, propylene, HDPE, LDPE, LLDPE, PP, VCM, PVC, Chlorine, Caustic Soda, EG				
Indorama Ventures	Port Neches	PO, PG and MTBE				
INEOS	Texas	PP, HDPE,Styrene				
Lotte	Lake Charles, Louisiana	Ethylene oxide (EO), Ethylene glycol (EG)				
LyondellBasell	La Porte, Channelview and Bayport, Corpus Christi	Ethylene, Propylene				
	Houston	Gasoline, Refined products, Methyl tertiary butyl ether (MTBE)				
Matharon Petroleum	Galveston Bay	Gasoline, refined				
MEGlobal	Freeport	EO, EG				
Motiva Enterprises	Port Arthur	Cracker				
Olin Corp	Freeport	Vinyls, Epoxy, Chlorakali				
OQ Chemicals	Bay City	Oxo-alcohols, aldehydes, acids and esters				
OxyChem	Corpus Christi	Chlorine, caustic soda, EDC, vinyl chloride monomer and polyvinyl chloride				
	Port Arthur	Propylene				
Total	La Porte	Polypropylene				
TPC Group	Houston	Butadiene (BD)				
Westlake Chemical Partners	Lake Charles, Louisiana	Ethylene				

Source: Platts, Aurgus Media, ICIS, Reuters, B&K Research



US chemical plant Force Majeures

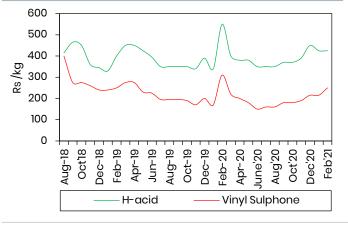
Company name	Plant locations	Products					
INEOS Olefins and Polymers Texas		Polypropylene					
OxyChem	Texas	Chlorine, Caustic soda, EDC, vinyl chloride monomer and polyvinyl chloride.					
LyondellBasell	Texas	Polyethylene					
Olin	Freeport, Texas,	US chlorine, caustic soda, ethylene dichloride, epoxy, hydrochloric acid and other products					
LyondellBasell	Texas	Styrene Monomer					
Vestolit	Colombia and Mexico	PVC					
Total	La Porte, Texas	Polypropylene					
Dow	Deer Park, St. Charles, Texas City, Freeport, Bayport and Louisville	2-Ethylhexyl Acrylate (2EHA), Butyl Acrylate (BA), Glacial Acrylic Acid (GAA), Methyl Acrylate (MA), Ethyl Acrylate (EA), Methyl Methacrylate (MMA), Glacial Methacrylic Acid (GMAA), Butyl Methacrylate (BMA), Glycidyl Methacrylate (GMA), Hydroxy Propyl Acrylate (HPA), Vinyl Acetate Monomer (VAM)					
Lyondellbasell	Texas	Isopropyl Alcohol					
BASF	Texas and the Texas Gulf Coast	2-Ethylhexanol (2EH), n-Butanol (NBOL), Isobutanol (IBOL), Isobutyraldehyde (IBAL), EP-202, EP-204, All Grades of Glacial Acrylic Acid (GAA), Butyl Acrylate (BA), Isobutyl Acrylate (IBA), 2-Ethylhexyl Acrylate (2EHA), Methyl Acrylate (MA), Ethyl Acrylate (EA)					
Celanese	Texas Gulf Coast	Acetic Acid, Vinyl Acetate Monomer (VAM), Ethyl Acetate, Acetic Anhydride, Methyl Acetate, Vinyl and Acrylic Emulsions, Ethylene Vinyl Acetate (EVA), Dimethylamine (DMA) and Trimethylamine (TMA), Methyl Isobutyl Carbinol (MIBC), and Methyl Isobutyl Ketone (MIBK), Paraformaldehyde					
Formosa Plastics	Texas	PVC					
Dow	Texas city	2-Ethyl Hexanol, 2-Methyl Butanol, Butanol, Isobutanol, Isobutanol Mixtures, Primary Amyl Alcohol, Propanol, Propanol Mixtures, : 2-Ethyl Hexanoic Acid, Isopentanoic Acid, Propionic Acid, Valeric Acid, Butyl Acetate, Propyl Acetate, UCAR™ Ester EEP, UCAR N-Pentyl Propionate					
Formosa Plastics	Texas	US polyethylene					
BASF	Pasadena, Texas	Dioctyl terephthalate (DOTP)					

Source: Platts, ICIS, Green Chemicals, B&K Research



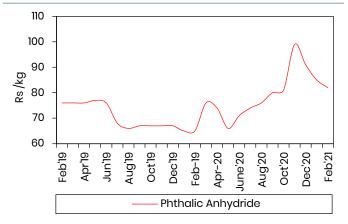
Trend of few key chemicals

Price trend - H-Acid and Vinyl Sulphone



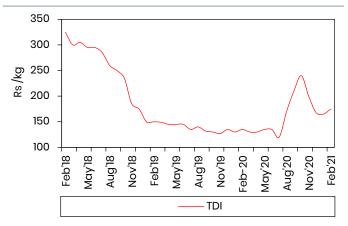
Source: B&K Research





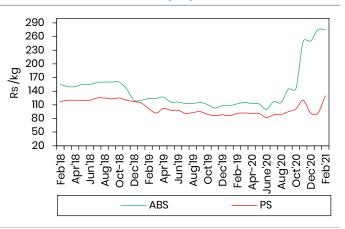
Source: B&K Research

Price trend - TDI

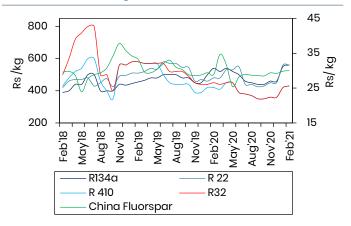


Source: B&K Research

Price trend – ABS and Polystyrene

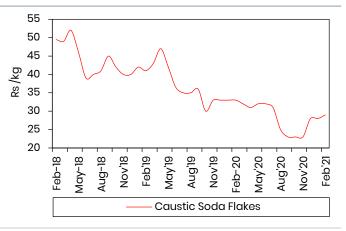


Price trend - Refrigerants



Price trend - Caustic Soda Flakes

4



Flash Note Chemicals - Channel checks



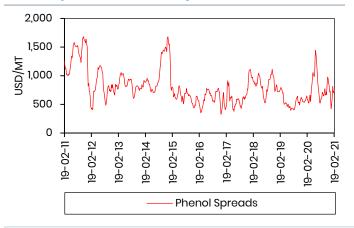
Phenol spreads at US\$ 761/MT...

Average spreads for 4Q'21 are up 10.9% YoY while down 17.6% QoQ to US\$ 636/MT. Average spreads for FYTD21 are up 53.0% YoY to US\$ 796/MT.

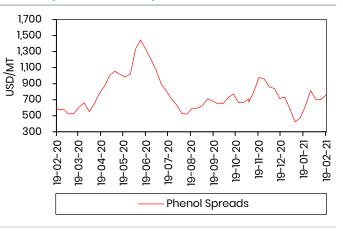
We understand that the spreads for Deepak Nitrite are 15-20% higher than mathematical calculations as they enjoy operational efficiencies.

Iso-propyl alcohol (IPA) prices shot up in March 2020 led by rising demand of hand sanitizers globally. Deepak Nitrite commissioned 30,000 mtpa Iso-Propyl Alcohol plant in April 2020 and hence it got benefitted from higher spreads in 1QFY21 (up 55.9% YoY and 1.1x QoQ).

Phenol spreads - Over the years



Phenol spreads - One-year trend



Source: Bloomberg, B&K Research



Channel checks

Chemicals	Std	Last Updated	Feb 20	Jan 21	Feb 21	YoY (%)	MoM (%)	Companies having exposure		
	Rs/kg	23-02-2021	110	270	275	150.0	1.9	INEOS Styrolution, Bhansali Engg.		
ABS	Prices co	ontinue to rem	nain elev	ated led	by suppl	ly constr	raints a	Ind high raw material price.		
	Rs/kg	23-02-2021	135	175	205	51.9	17.1	GNFC		
TDI	Supply c	disruption in th	ne global	market l	has led t	o firming	g up of	prices; expected to rise further.		
	Rs/kg	23-02-2021	94	210	220	134.0		BASF		
MDI		disruption in th	ne alobal	market l	has led t	o firmino	to au c	prices; expected to rise further.		
H-Acid	Rs/kg	23-02-2021	550	425	425	(22.7)		Bodal, Shree Pushkar, Bhageria, Ki		
	Rs/kg	23-02-2021	310	215	250	(19.4)		Bodal, Shree Pushkar, Bhageria, Ki		
Vinyl Sulphone						. ,		I shortage coupled with rising raw		
thiy captone		l prices; demo						in sheri tage boapied with hsing raw		
	Rs/kg	23-02-2021	86	92	130	51.2		Supreme Petro, INEOS Styrolution		
Polystyrene								· · ·		
l'oryotyronio	•	Higher raw material price has led to short supply of polystyrene in the market thereby resulting into price uptick.								
	Rs/kg	23-02-2021	1,100	400	350	(68.2)	(12 5)	Deepak Nitrite		
DASDA						. ,		stable at current levels.		
Orational	Rs/kg	23-02-2021	9 eusing 600	350 supply c	320	(46.7)		Deepak Nitrite		
Optical Brightonoro						. ,	. ,	Deepak Nitrite		
Brighteners		ontinue to rem						005		
R-134A	Rs/kg	23-02-2021	500	550	560	12.0		SRF		
								in raw material prices.		
R-22	Rs/kg	23-02-2021	460	550	560	21.7		SRF, Navin Fluorine and Gujarat Fluoro		
R-410	Rs/kg	23-02-2021	420	420	430	-		SRF, Navin Fluorine and Gujarat Fluore		
R-32	Rs/kg	23-02-2021	440	420	430	(2.3)	2.4	SRF and Gujarat Fluoro		
Phenol	Rs/kg	23-02-2021	76	65	112	47.4	72.3	Deepak Nitrite		
Phthalic	Rs/kg	23-02-2021	67	85	100	49.3	17.6	IG Petro Chemicals and Thirumalai Chemicals		
Anhydride	Supply c	disruption in th	ne global	market l	has led t	o firmino	g up of	prices.		
	Rs/kg	22-02-2021	_	112	117	_		SRF		
BoPET		ave inched up	led by ri	sina raw	materia	l prices.				
	Rs/kg	22-02-2021	_	140	163	_	16.4	SRF		
BoPP		aw material pr	ices and			nts led to				
Acrylonitrile	Rising re	19-02-2021		126	185	_	•	Vinati Organics (RM)		
-	Rs/kg	19-02-2021	_	120	185	_		Pidilite Industries (RM)		
Vinyl Acetate Monomer	-									
Monomer		ontinues to inc			-					
Acetone	Rs/kg	09-02-2021	54	61	86	59.3		Deepak Nitrite		
		disruption in th	ie giobai			onrming		·		
Iso-Propyl	_	Rs/kg 09-02-2021 – 80 108 – 35.0 Deepak Nitrite								
Alcohol	Uptick in Acetone prices resulted into higher IPA prices; demand continues to remain healthy									
		arma industry								
Caustic Soda	Rs/kg	09-02-2021	33	28	30	(9.1)	7.1	Gujarat Fluoro, GACL, Meghmani Organics, Atul		
Flakes		lemand from t es to be positi [,]		d paper	industry	continu	es to si	upport prices; Chlorine prices		

Flash Note Chemicals - Channel <u>checks</u>



Chemicals	Std	Last Updated	Feb 20	Jan 21	Feb 21	YoY (%)	MoM (%)	Companies having exposure		
	Rs/kg	09-02-2021	26	25	25	(2.0)	_	Tata Chemicals, GHCL		
Soda Ash	•	may witness s Id from glass ir	•				η ασσου	int of rejection of ADD on imports;		
Sodium	Rs/kg	09-02-2021		23	26		13.0	Tata Chem, GHCL		
Bicarbonate	Demand from Pharma industry continues to remain strong and the prices are expected to be stable.									
CPC Blue	Rs/kg	09-02-2021	270	350	330	22.2	(5.7)	Meghmani Organics, Sudarshan		
Beta Blue	Rs/kg	09-02-2021	340	380	360	5.9	(5.3)	Chemical Industries		
Alpha Blue	Rs/kg	09-02-2021		480	460		(4.2)			
	Rs/kg	09-02-2021	410	550	530	29.3	(3.6)			
Pigment Green		continue to ren product prices		ated led	by highe	r raw m	aterial	costs; demand is soft on account		
	Rs/kg	09-02-2021		93	105		12.9	Phillips Carbon Black and Himadri Speciality Chemicals		
Carbon Black	•	Uptick in the price was on account of lower and expensive imports; demand from tyre industry continues to remain strong.								
PTFE	Rs/kg	09-02-2021		550	650		18.2	Gujarat Fluoro		
	Expens	ive imports co	upled wit	h improv	ring dem	and led	to MoN	A increase in the prices.		
	Rs/kg	09-02-2021		119	112		(5.9)	IG Petro Chemicals and		
Maleic								Thirumalai Chemicals		
Anhydride		continues to co ues to remain h		n their h	ighs due	to easiı	ng supp	oly from imports. Demand		
Benzoic Acid	Rs/kg	09-02-2021		72	72		_	IG Petro Chemicals and Thirumalai Chemicals		
Palm Oil	Rs/kg	09-02-2021		106	114		7.5			
SLS	Rs/kg	09-02-2021		142	145		2.1	Galaxy, Aarti Surfactants and Ultramarine Pigments		
SLES	Rs/kg	09-02-2021		48	49		2.1	Galaxy, Aarti Surfactants and Ultramarine Pigments		
	Demand for SLES continues to remain healthy.									
LABSA	Rs/kg	09-02-2021		94	96		2.1	Galaxy, Aarti Surfactants and Ultramarine Pigments		
	Demand remained stable MoM.									

Reference report

http://zzz.bksec.com/Reportsupload/2021/1/Chemicals - Monthly Update - 27 Jan 21.pdf http://zzz.bksec.com/Reportsupload/2021/2/Chemicals - Channel checks - Flash Note - 11 Feb 21.pdf

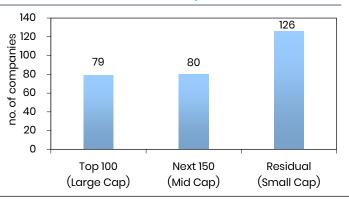
Ranjit Cirumalla Research Analyst ranjit.cirumalla@bksec.com +91-22-40317127 Parth Adhiya Research Analyst parth.adhiya@bksec.com +91-22-40317167

7

Sanket Kabra Research Analyst sanket.kabra@bksec.com +91-22-40317130



B&K Universe Profile – by AMFI Definition



B&K Securities is the trading name of Batlivala & Karani Securities India Pvt. Ltd.

B&K Investment Ratings

	3			
	LARGE CAP (Market Cap > USD 2 bn)	MID & SMALL CAP (Market Cap < USD 2 bn)		
BUY	>+15%	>+20%		
HOLD	+15% to -10 %	+20% to -15 %		
SELL	<-10%	<-15%		

Disclaimer: This report was prepared, approved, published and distributed by Batlivala & Karani Securities India Private Limited ("B&K") located outside of the United States (a "non-US Group Company"), which accepts responsibility for its contents. It is distributed in the U.S. by Enclave Capital, a U.S. registered broker dealer, on behalf of B&K, only to major U.S. institutional investors (as defined in Rule 15a-6 under the U.S. Securities Exchange Act of 1934 (the "Exchange Act") pursuant to the exemption in Rule 15a-6. Neither the report nor any analyst who prepared or approved the report is subject to U.S. legal requirements or the Financial Industry Regulatory Authority, Inc. ("FINRA") or other regulatory requirements pertaining to research reports or research analysts. No non-US Group Company is registered as a broker-dealer under the Exchange Act or is a member of the Financial Industry Regulatory organization. Outside the United States, this report is distributed by B&K or an authorized affiliate of B&K.

The report has been compiled or arrived from sources believed to be reliable and in good faith, but no representation or warranty, express or implied is made as to their accuracy, completeness or correctness. B&K has not verified the factual accuracy, assumptions, calculations or completeness of the information. Accordingly, B&K accepts no liability whatsoever for any direct or consequential loss or damage arising from (i) the use of this communication (ii) reliance of any information contained herein, (iii) any error, omission or inaccuracy in any such Information or (iv) any action resulting there from. B&K provides the information for the purpose of the intended recipient's analysis and review and recipients are advised to verify the factual accuracy, assumptions, calculations and completeness of the information.

This report was produced by B&K solely for information purposes and for the use of the recipient. It is not to be reproduced, redistributed under any circumstances and is not to be copied or made available to any person other than the recipient. All estimates, expressions of opinion and other subjective judgments contained herein are made as of the date of this document. Emerging securities markets may be subject to risks significantly higher than more established markets. In particular, the political and economic environment, company practices and market prices and volumes may be subject to significant variations. The ability to assess such risks may also be limited due to significantly lower information quantity and quality. By accepting this document, you agree to be bound by all the foregoing provisions. This document does not constitute an offer of, or an invitation by or on behalf of B&K or its affiliates or any other company to any person, to buy or sell any security.

The views of any Analyst reflected in this report are given in compliance with the Research Analyst Regulations, 2014. All analysts covering the securities/ companies mentioned in this report have complied with the appropriate set of rules, regulations & procedures in their detailed coverage report(s) of the respective securities/companies. It is important to note that any dispute with respect to this Research Report, would not have access to stock exchange investor redressal forum or arbitration mechanism.

Analyst Certification: Each of the analysts identified in this report certifies, with respect to the companies or securities that the individual analyses, that (1) the views expressed in this report reflect his or her personal views about all of the subject companies and securities and (2) no part of his or her compensation was, is or will be directly or indirectly dependent on the specific recommendations or views expressed in this report.

Disclosures, applying to B&K and the Analyst (together with associates and family members)

Ownership interest in the issuer of the securities mentioned	< 1%
Other financial interest in the issuer	None
Other material conflict of interest	None
Compensation/benefits received from issuer/3rd Parties in past 12 months:	
Public offerings managed/co-managed for issuer	None
Fees for merchant banking, investment banking or brokerage services (as percentage of issuer's turnover)	< 0.1%
Compensation for other services (as percentage of issuer's turnover)	< 0.1%
Analyst service as officer, director or employee of the issuer	None
Involvement in market-making in the issuer's securities	None



- B&K or its Affiliates have not recently been the beneficial owners of 1% or more of the securities mentioned in this report. 1.
- 2. B&K or its Affiliates have not managed or co-managed a public offering of the securities mentioned in the report in the past 12 months.
- 3 B&K or its Affiliates have not received compensation for investment banking services from the issuer of these securities in the past 12 months and do not expect to receive compensation for investment banking services from the issuer of these securities within the next three months.
- 4. However, one or more person of B&K or its affiliates may, from time to time, have a long or short position in any of the securities mentioned herein and may buy or sell those securities or options thereon either on their own account or on behalf of their clients.
- B&K or its Affiliates may, to the extent permitted by law, act upon or use the above material or the conclusions stated above or the research or analysis 5. on which they are based before the material is published to recipients and from time to time provide investment banking, investment management or other services for or solicit to seek to obtain investment banking, or other securities business from, any entity referred to in this report. 6.

As of the publication of this report, Enclave Capital does not make a market in the subject securities.

Important US Regulatory Disclosures on Subject Companies

Enclave Capital is the distributor of this document in the United States of America. Any US customer wishing to effect transactions in any securities referred to herein or options thereon should do so only by contacting a representative of Enclave Capital and any transaction effected by a U.S. customer in the securities described in this report must be effected through Enclave Capital (19 West 44th Street, suite 1700, New York, NY 10036. Tel No: (646) 454 8600).

B & K Securities India Private Ltd.

Equity Research Division: Unit No. 1101, 1103, 1104, 11th Floor, Hallmark Business Plaza, Sant Dnyaneshwar Marg, Near Guru Nanak Hospital, Bandra East, Mumbai - 400 051, India. Tel: +91-22-4007 6000, Fax: +91-22-2651 0024 / +91-22-2640 1520.

Registered Office: Room No. 3/4, 7 Lyons Range, Kolkata - 700 001. Tel.: +91-33-2243 7902.

SEBI Registration No. for Batlivala & Karani Securities India Pvt. Ltd. (Research Entity) is INH300000211

B&K Research is also available on Bloomberg <BNKI>, Thomson First Call & Investext.