MARKETS AND PROFITABILITY

Profitability and Price Forecast: Acrylic Acid - 2022

October 2022



This Report was prepared by NexantECA, the Energy and Chemicals Advisory company ("NexantECA"). Except where specifically stated in this Report, the information contained herein is prepared on the basis of information that is publicly available, and contains no confidential third party technical information to the best knowledge and belief of NexantECA. The information has not been independently verified or otherwise examined to determine its accuracy, completeness or financial feasibility. Neither NexantECA, Subscriber nor any person acting on behalf of either shall have any liabilities for any loss or damage arising from or connected to the use of any information contained in this Report. NexantECA does not represent or warrant that any assumed conditions will come to pass.

The Report is for Subscriber's internal use only and shall be kept strictly confidential. The Report should not be otherwise reproduced, distributed or used without first obtaining prior written consent by NexantECA. Each Subscriber agrees to use reasonable effort to protect the confidential nature of the Report.

Copyright © by NexantECA (BVI) Ltd. 2022. All rights reserved.



Contents

1	Executive Summary1					
	1.1	Introdu	uction	1		
2	Economic Assumptions and Forecast Methodology					
	2.1	Introdu	uction	2		
	2.2	Scena	arios	3		
	2.3	Crude Oil				
		2.3.1	Crude Oil Price Basis	4		
		2.3.2	Crude Oil Scenarios	5		
		2.3.3	Low Crude Oil Price	7		
		2.3.4	Medium Crude Oil Price	7		
		2.3.5	High Crude Oil Price	7		
	2.4	Econo	8			
		2.4.1	Forecasting Methodology/Assumptions	8		
		2.4.2	Global Economic Growth	8		
	2.5	Inflatio	on	11		
	2.6	Excha	ange Rates	12		
		2.6.1	Forecasting Methodology and Assumptions	12		
		2.6.2	Outlook for the Euro	12		
	2.7	Profita	13			
		2.7.1	Introduction	13		
		2.7.2	Price Influences	14		
		2.7.3	Petrochemical Production Costs	16		
		2.7.4	Driving Forces for Profitability	18		
		2.7.5	Cyclicality of the Petrochemical Industry	22		
3	Petrochemical and Polymer Industry Profitability23					
	3.1	Asia Pacific				
	3.2	United States				
	3.3	Western Europe				
4	Petro	chemica	al Feedstocks and Refining Products Pricing	29		
	4.1	Napht	tha	31		
	4.2	Gasoline				
	4.3	Fuel Oil				
	4.4	Natural Gas				
	4.5	Ethane				
	4.6	Propane3				
	4.7	Coal		38		
5	Acryl	ic Acid		39		
	5.1		uction			
		5.1.1	Pricing Basis and Mechanism	39		
		512	Regional Price Definitions	40		



5.2	Asia Pacific		
	5.2.1	Profitability Projections	41
	5.2.2	Price Projections	43
5.3	United States		
	5.3.1	Profitability Projections	44
		Price Projections	
5.4	Western Europe		
	5.4.1	Profitability Projections	47
	5.4.2	Price Projections	49
5.5	Region	nal Price Spreads	50



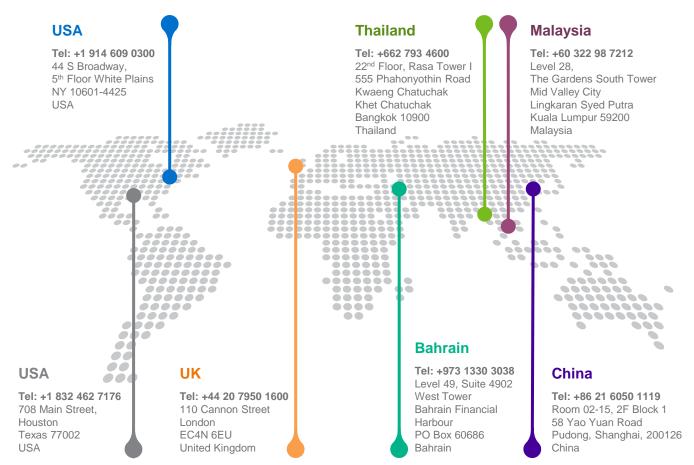
Figures Figure 1 Figure 2 Figure 3 Figure 4 Figure 5 Figure 6 Figure 7 Figure 8 Figure 9 Figure 10 Figure 11 Figure 12 Figure 13 Figure 14 Figure 15 Figure 16 United States Petrochemical Feedstock Prices Relative to WTI Crude Oil30 Figure 17 Figure 18 Global Naphtha Prices......31 Figure 19 Figure 20 Figure 21 Figure 22 Figure 23 Figure 24 Figure 25 Asia Acrylic Acid Cash Margins......41 Figure 26 Figure 27 United States Acrylic Acid Margins44 Figure 28 Figure 29 United States Glacial Acrylic Acid Cost Margin and Price Projections46 Figure 30 Figure 31 Western Europe Glacial Acrylic Acid Margins47 Figure 32 Figure 33 Figure 34 Global Glacial Acrylic Acid Prices50 **Tables** Table 1 World Economic Growth......9 Table 2 Asia Acrylic Acid Cost Profitability and Price Projections.......41 Table 3 Table 4 Western Europe Acrylic Acid Cost Profitability and Price Projections47







NexantECA partners with clients to help them navigate the big global energy, chemicals and materials issues of tomorrow. We provide independent advice through our consulting, subscriptions and reports, and training businesses using expertise developed in markets, economics and technology through our fifty years of operation. We are entirely dedicated to supporting sustainable development of the industry and provide expert advice with efficiency, speed, and agility.



Disclaimer

This Report was prepared by NexantECA, the Energy and Chemicals Advisory company. Except where specifically stated otherwise in this Report, the information contained here is prepared on the basis of information that is publicly available, and contains no confidential third-party technical information to the best knowledge of NexantECA. Aforesaid information has not been independently verified or otherwise examined to determine its accuracy, completeness or financial feasibility. Neither NexantECA, Client nor any person acting on behalf of either assumes any liabilities with respect to the use of or for damages resulting from the use of any information contained in this Report. NexantECA does not represent or warrant that any assumed conditions will come to pass.

Copyright © by NexantECA (BVI) Ltd. 2022. All rights reserved.