

Adipic Acid

INVESTMENT OPPORTUNITY SCORECARD

CHEMICALS

Aug 2021



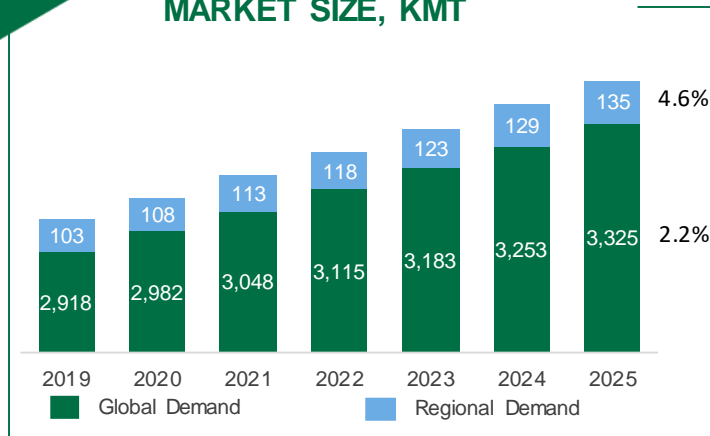
CHEMICALS

Adipic Acid

OPPORTUNITY DESCRIPTION: Opportunity to setup Adipic Acid manufacturing plant in KSA to cater regional and global demand

DEMAND

MARKET SIZE, KMT



INVESTMENT HIGHLIGHTS

- the project is purely private sector investment with land lease from MODON
- The capital investment size is to be determined based on the plant capacity and available feedstock materials

INVESTMENT OVERVIEW

VALUE PROPOSITION

- KSA is one of the largest chemical producers in the world and contributes ~10% to the global output
- KSA is strategically located at the crossroads of several markets that have high demand for chemical products
- KSA benefits from having an abundant access to raw materials and a high standard of infrastructure that is continuously being improved upon
- Opportunity for first mover advantage due to non-existent local production of Propionic Acid and lack of competition from major global manufacturers
- This opportunity has a strategic alignment with vision 2030 and National Industrial Strategy by supporting many sectors such as automotive and food and beverage

KEY DEMAND DRIVERS

- Around 52% of the global demand was used in nylon 66 production; the remainder was used in non-nylon applications.
- The primary production will be supplemented by Nylon 66 and compounding, possibly leading to future component manufacture for automotive. This will boost the local and global demand.
- Also, the increase in demand for lightweight engineering plastic is likely to drive the adipic acid market's growth.

MARKET OVERVIEW

GLOBAL TRENDS

- Global Adipic Acid consumption is expected to increase to over 3.1 million metric tons in 2025, with an average annual growth rate of 3.0% during 2020–2025. Consumption of adipic acid was around 2.7 million metric tons in 2020, driven primarily by China.
- Northeast Asian consumption of adipic acid will continue to drive global demand in the next five years. Japan, Taiwan, and South Korea are all expected to exhibit some increased consumption.
- Global trade in Adipic Acid represented about 18% of consumption in 2020. Trade volumes are expected to increase to around 563,000 metric tons in 2025.
- The major markets for adipic acid are as a feedstock for nylon 66 resin and fibre production; the remainder is consumed in nonnylon applications, including polyurethanes, plasticizers, food additives, and pharmaceuticals.

SUPPLY

SCALABILITY AND LOCALIZATION

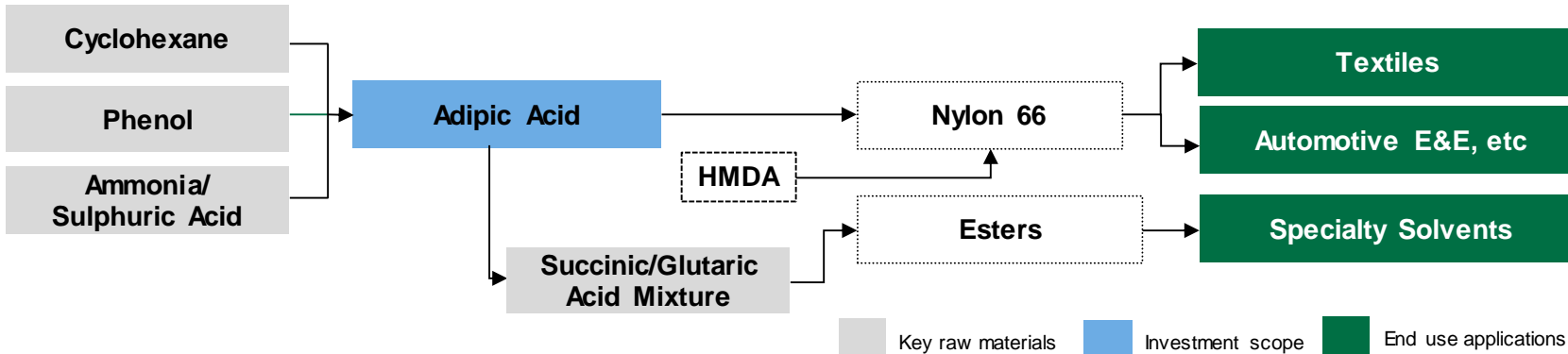
Grade: Low Medium High

- Easy local access to key the primary raw materials in KSA - Saudi ChevronPhillips is producing cyclohexane in Al Jubail, and Nitric acid is produced by Sadara Chemical Company in Al Jubail. Hence it will be beneficial to produce the product in PlasChem value park.
- Downstream industries, such Electronic Chemicals, packaging, advanced fibers, nutraceuticals, can benefit from the local production of Adipic Acid
- KSA's strategic advantage over regional peers in cost of establishing the business, especially in the manufacturing domain

IMPORT DEPENDENCY

- No local production of Adipic Acid in Saudi Arabia, 100% of the local demand in KSA is met by imports

VALUE CHAIN ANALYSIS



KEY STAKEHOLDERS



ENABLING FACTORS

ENABLERS

- Up to 75% of project financing by Saudi Industrial Development Fund (SIDF)
- 2-year grace period for the repayment of loans
- Expat worker levy waived-off for industrial manufacturers until October 2024
- HRDF covers 30-50% of Saudi employees monthly salaries (additional 10% for females) for 2 years, provided that it does not exceed USD 4,000

COST OF DOING BUSINESS IN KSA

| Factor | Ranking Amongst Regional Peers |
|--|--------------------------------|
| Electricity tariffs for industrial players | \$48 /MWh |
| Productivity adjusted wages | \$3.3 /hour |
| Logistics Performance Index (1 – 5) | 3.2 |
| Customs Clearance Index (1 – 5) | 2.7 |
| Ease of getting credit (0 – 100) | 50 |

Bottom 25% | Top 75% | Top 50% | Top 25%

DEFINITIONS

| # | SCORECARD SECTION | DEFINITIONS |
|----|-------------------------------|---|
| 1 | Market size | Size of market in value/volume in KSA and/or Region (MENA/GCC) covering future projections based on available estimates from published /government sources |
| 2 | Demand drivers | A select number of factors that will influence future demand for the related product/service |
| 3 | Investment highlights | An overview of key financial metrics summarizing the investment opportunity along with the expected return based on the suggested investment size |
| 4 | Value proposition | Summary of key differentiators that position KSA as a strategic choice over other regional/global peers |
| 5 | Market readiness | An overview of KSA market structure, market maturity and level of participation by local and global players |
| 6 | Competitor analysis | List of the local & international players manufacturing the underlying product in Saudi Arabia and their market share |
| 7 | Global trends | Latest business developments within the sector/product category |
| 8 | Scalability and localization | Ease of scaling the business across the value chain or into new adjacent products or geographies that would maximize the opportunity's investment returns and the ability and potential to locally manufacture the product and its components |
| 9 | Import dependency | An overview of the countries from which Saudi Arabia is importing the product and their value/volume and share in total imports |
| 10 | Value chain analysis | The process or activities that would potentially need to be carried out to deliver the underlying product or service |
| 11 | Key stakeholders | Government institutions, organizations, and/or authorities that participate or influence the market for the underlying product/service |
| 12 | Enablers | Factors that enable investment in the underlying opportunity |
| 13 | Cost of doing business in KSA | Key factors that position KSA as a competitive destination for investment in the region |

DISCLAIMER

- This report must be used only to access information, and the information must not be construed, under any circumstances, explicitly or implicitly, as an offer to sell or a solicitation to buy or sell or trade in any opportunity herein mentioned.
- Ministry of Investment (MISA) has no undertaking to update these materials after the date, with the understanding that such information may become outdated or inaccurate.
- Mentioned information in this report is obtained from reliable sources but its accuracy and reliability are in no way guaranteed. No guarantee of any kind is tacit or explicit when projections of future conditions are attempted. MISA has used public/or confidential data and assumptions and has not independently verified the data and assumptions used in the analyses. Changes in underlying data or operating assumptions will clearly impact the analyses and conclusions.
- The financial evaluations, projected market and financial information, and conclusions contained in these materials are based upon standard methodologies, are not definitive projections, and are not guaranteed by MISA
- The content of this report must not be construed as an implied promise or guarantee for profit or limited loss express or implied by or from MISA or any of its officers, directors, employees and affiliates. All mentioned investments in this report are subject to risk, which should be considered prior to making any investment decisions
- MISA shall have no liability whatsoever to any third party, and hereby any third party waives any rights and claims it may have at any time against MISA with regard to this report, any services or other materials, including the accuracy or completeness thereof.

CONNECT WITH US FOR MORE DETAILS:

Petrochemicals@misa.gov.sa

investsaudi.sa



@investsaudi

