

Aluminum Hydroxide – Flame Retardant Grade

INVESTMENT OPPORTUNITY SCORECARD

CHEMICALS

Aug 2021

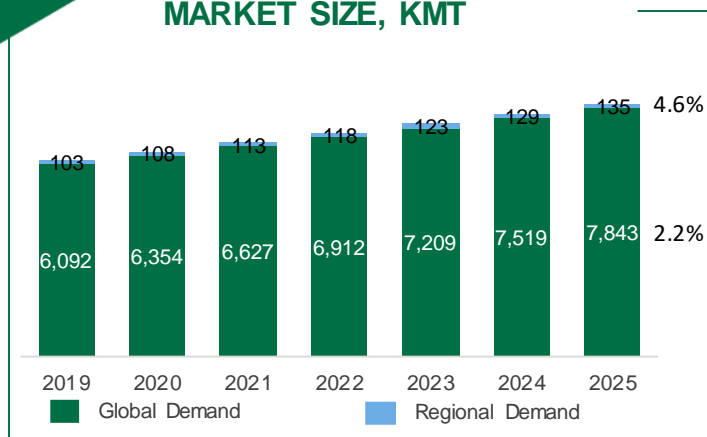


Aluminum Hydroxide – Flame Retardant Grade

OPPORTUNITY DESCRIPTION: Opportunity to setup Aluminum Hydroxide – Flame Retardant Grade 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

- ATH is the largest flame retardant by volume globally, accounting for 38% of total flame retardant consumption. This market is dominated by higher-value and higher-purity grades, obtained mainly by reprecipitating or finely milling ATH.

MARKET OVERVIEW

GLOBAL TRENDS

- The aluminum hydroxide market size has the potential to grow by USD 672.37 million during 2021-2025, and the market's growth momentum will accelerate at a CAGR of 4%.
- Production of aluminum chemicals is forecast to grow globally at 1.9% per year over the next five years.
- Flame retardants and fillers are forecast to show the strongest growth, with global consumption of ATH for this application increasing at 3–3.5% per year in 2020–25.
- About 64% of nonmetallurgical ATH was consumed to produce aluminum chemicals—aluminum sulfate, aluminum fluoride, aluminum chlorides (including polyaluminum chloride), and sodium aluminates. The majority of these chemicals are used in drinking water purification and wastewater treatment or in pulp and paper production.



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SUPPLY

SCALABILITY AND LOCALIZATION

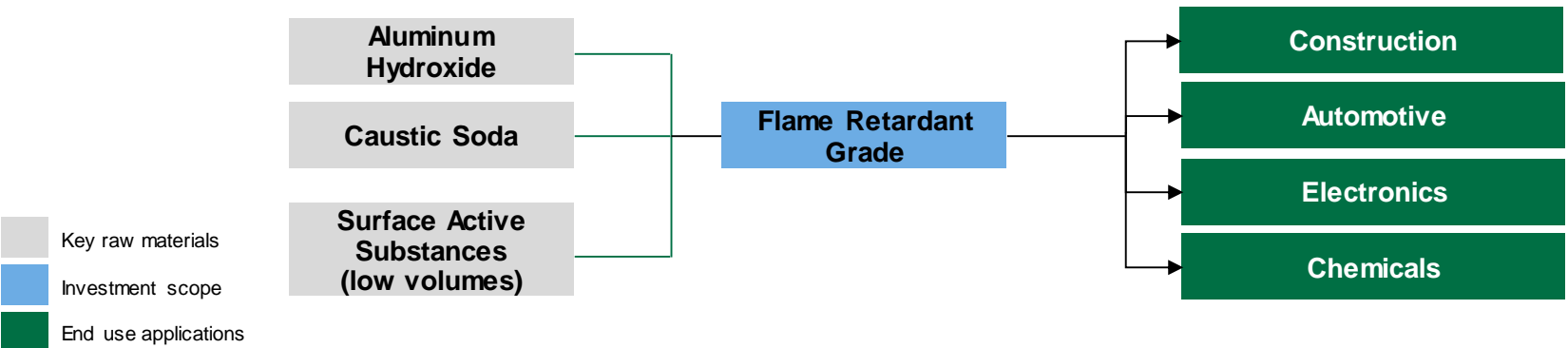
Grade: Low Medium High

- Easy local access to key raw materials in KSA – Caustic Soda is available from SAMAPCO in Al Jubail and Bauxite is available in Ras Al Khair from Maaden
- Aluminum hydroxide is produced in Saudi Arabia by Ma'aden predominantly for the production of Aluminum metal. The starting material could also be used to produce well defined powders of aluminum hydroxide with small particle size and a surface treatment to improve
- KSA's strategic advantage over regional peers in cost of establishing the business, especially in the manufacturing domain.

IMPORT DEPENDENCY

- 100% of the local demand in KSA is met by local production.

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	<div><div></div><div></div><div>\$48 /MWh</div><div></div></div>
Productivity adjusted wages	<div><div></div><div></div><div>\$3.3 /hour</div><div></div></div>
Logistics Performance Index (1 – 5)	<div><div></div><div></div><div>3.2</div><div></div></div>
Customs Clearance Index (1 – 5)	<div><div></div><div></div><div>2.7</div><div></div></div>
Ease of getting credit (0 – 100)	<div><div></div><div></div><div>50</div><div></div></div>

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

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