[Alumina Trihydrate]

INVESTMENT OPPORTUNITY

[Specialty]

استثمر في السعودية
INVEST SAUDI

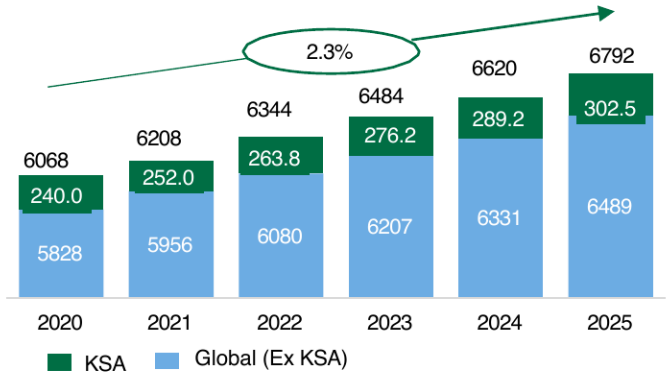
[Specialty] Alumina Trihydrate

High Potential | Moderate Potential | Low Potential

OPPORTUNITY DESCRIPTION: Opportunity to develop alumina trihydrate production facility of ~100 KTA in KSA to cater regional and global demand

DEMAND

MARKET SIZE, KT



INVESTMENT OVERVIEW

INVESTMENT HIGHLIGHTS

- Expected investment size of ~USD 120-150 MN
- Plant capacity: 100 KTA
- Expected IRR: 15-18%

VALUE PROPOSITION

- KSA including other Middle Eastern countries are dependent on imports.
- Proximity to key demand centres like Africa, Southeast Asia and Northeast Asia along with strong logistics infrastructure to enhance export capability.
- Producing alumina trihydrate in the Kingdom will offer export opportunities to the growing markets of Africa and Western Europe.

MARKET OVERVIEW

KEY DEMAND DRIVERS

- Mainland China continues to be the major consumer of alumina trihydrate in chemical applications particularly, aluminum sulfate and aluminum fluoride.
- Flame retardants and fillers for plastics will continue to grow at a strong rate over the next five years because of an increase in safety regulations and continued replacement of brominated flame retardants.

KEY PLAYERS

- CHALCO
- East Hope Group
- Liaocheng Luxi Methylamine Chemical
- Shaanxi Xinghua Chemical

GLOBAL TRENDS

- World consumption of alumina trihydrate in chemical markets in 2020 is just under 6.1 million metric tons.
- The most growth over the next five years will be in the production of aluminum sulfate and polyaluminum chloride for use in water treatment chemicals.
- All markets were impacted by the global economic downturn following the drop in demand caused by the COVID-19 pandemic. The largest decreases in demand were seen in Western Europe, the United States, and the Middle East and Africa. From the low base level of 2020, better growth will be seen in Western and Central Europe, the Middle East, Africa, and South America over the next five years.

[Specialty] Alumina trihydrate

Public / متاح

SUPPLY

SCALABILITY AND LOCALIZATION

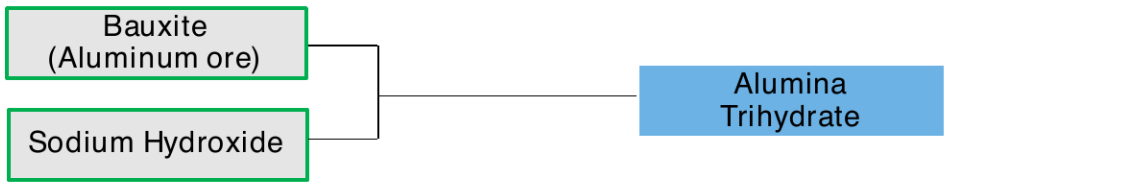
Grade: Low | Medium | **High**

- Bauxite, the primary raw material is available in the Kingdom in Ma'aden Bauxite mine at Al Ba'itha.
- Dependency of KSA on alumina trihydrate imports presents an attractive opportunity considering the availability of raw materials.
- Growing demand in flame retardants and increasing usage in the production of aluminum sulfate provides an opportunity to produce alumina trihydrate in Saudi Arabia.

IMPORT DEPENDENCY

- Imports of alumina trihydrate in the Middle East stood at 223 thousand metric tons in 2020.
- In December 2015, Ma'aden Aluminum, a joint venture between Ma'aden and Alcoa, began production at the new 1.8 million metric ton alumina refinery in Ras AzZawr, Saudi Arabia.

VALUE CHAIN



Key raw materials | Investment scope | End use applications | Raw materials available in KSA

Served Applications

- Aluminum chemicals (aluminum sulfate, aluminum fluoride, etc)
- Flame retardants
- Detergent zeolites
- Catalysts & desiccants
- Titanium dioxide coatings

KEY STAKEHOLDERS

وزارة الصناعة والثروة المعدنية | وزارة الاستثمار Ministry of Investment | MODON | التجمعات الصناعية Industrial Clusters | National Industrial Development and Logistics Program | الصندوق الصناعي Saudi Industrial Development Fund

ENABLING FACTORS

ENABLERS & INCENTIVES

- 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 employee's monthly salaries (additional 10% for females) for 2 years, provide that it does not exceed USD 4,000

COST OF DOING BUSINESS IN KSA

Factor	Ranking amongst regionalpeers
Electricity tariffs for industrial players	$48 /MWh
Productivity adjusted wages	$3.3 /hour
Logistics Performance Index (1-5)	3.2
Construction Costs (Indexed to US, % 0 is cheapest)	74
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	Business 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	Global trends	Latest business developments within the sector/product category
7	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
8	Import dependency	An overview of the countries from which Saudi Arabia is importing the product and their value/volume and share in total imports
9	Value chain analysis	The process or activities that would potentially need to be carried out to deliver the underlying product or service
10	Key stakeholders	Government institutions, organizations, and/or authorities that participate or influence the market for the underlying product/service
11	Enablers	Factors that enable investment in the underlying opportunity
12	Cost of doing business in KSA	Key factors that position KSA as a competitive destination for investment in the region. Productivity adjusted wages do not include cost of $1.23/hour towards annual recurring charges including work permit, resident identity (iqama) and health insurance

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