

# Alcohol Ether Sulfate

INVESTMENT OPPORTUNITY

[Specialty]

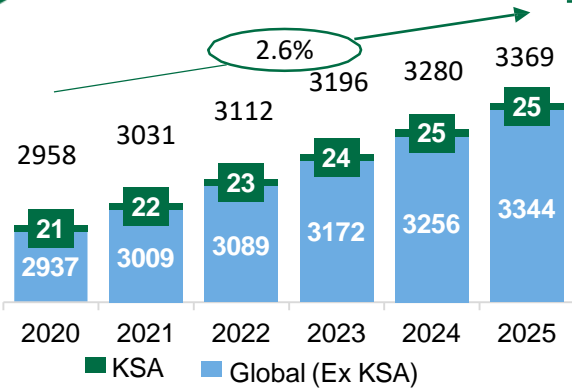


# Alcohol Ether Sulfate (AES)

**OPPORTUNITY DESCRIPTION:** Opportunity to develop Alcohol Ether Sulfate production facility in KSA to substitute imports in the first instance and then supply growing markets in India, Africa and the wider Asia-Pacific region.

## DEMAND

MARKET SIZE, KT



## INVESTMENT OVERVIEW

### INVESTMENT HIGHLIGHTS

- Expected investment size of USD 45-50 MN
- Plant capacity: 25 KTA (minimum)
- Expected IRR: 15-20%
- Investment covers sulphonation only. Some units are designed to be multi-purpose and can also make linear alkylbenzene sulphonates, alcohols sulphates, etc.

### VALUE PROPOSITION

- All AES feedstocks are already available in KSA, namely alcohol ethoxylates, sulphur, detergent range alcohols, high purity ethylene oxide and ethylene.
- There is some domestic production of alcohol ether sulfate in the country. However, there is an opportunity to setup another unit since the region currently imports majority of the requirement.
- Proximity to the major growth region i.e., Northeast Asia and strong logistics infrastructure to enhance export capability for distributing the products within Middle East and to key export markets.

### KEY DEMAND DRIVERS

- Alcohol ether sulfates are used for making hand dishwashing liquids and concentrates, detergents for hand washing liquids, wool and fine-fabric washing detergents, wash pastes, hard-surface cleaners, and industrial cleaning agents.
- Alcohol ether sulfates are also used in personal care products (greater mildness compared with AS) and several industrial applications (agricultural, oil field, textile, metalworking, and emulsion polymerization).
- Detergent manufacturers might switch between AES and AS surfactants in some applications. AES also competes with LAS (anionic) and AE non-ionics in household formulations.

### KEY PLAYERS

- BASF
- Solvay
- P&G
- Lubrizol
- Stepan
- Colgate Palmolive

## MARKET OVERVIEW

### GLOBAL TRENDS

- The global consumption of alcohol ether sulfates was around 3.0 million metric tons in 2021. The demand is expected to reach over 3.3 million metric tons by 2025.
- Alkyl/alcohol ether sulfates are like alcohol sulfates, but are derived from sulfating ethoxylated fatty alcohols, containing one to four moles of ethylene oxide.
- North America is the biggest market for alcohol ether sulfates, followed by Northeast Asia and West Europe.
- Alcohol ether sulfates are used in household detergents, personal care products, household cleaners and I&I cleaners.
- Alcohol ether sulfate (AES) is largely used in laundry and dishwashing liquids because of its good cleaning properties, mildness, and relatively low cost.

# CHEMICALS

## Alcohol Ether Sulfate (AES)

Public / متاح

### SUPPLY

#### SCALABILITY AND LOCALIZATION

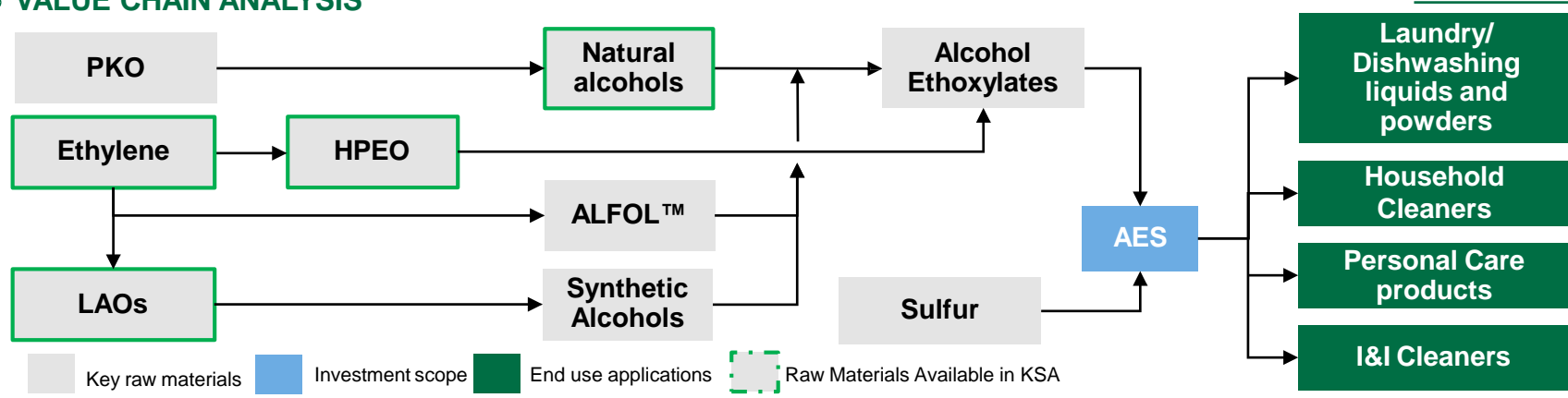
Grade: Low Medium High

- AES is already made in KSA using technology licensed by Desmet-Ballestra SpA. AES is made via the sulphonation of alcohol ethoxylates (AE), themselves made from the reaction of high alcohols in the C<sub>12</sub>-C<sub>14</sub> range and high purity ethylene oxide (HPEO), typically 2-3 moles of HPEO. Higher natural alcohols are made in KSA based on imported palm kernel oil (PKO). HPEO and its ethylene feedstock are made in KSA.
- Synthetic higher alcohols could be made in KSA in future if suitable technology could be licensed. These processes could include ALFOL™ that makes alcohols from ethylene and cobalt-based hydroformylation technology that uses C<sub>12</sub>-C<sub>14</sub> linear alpha olefins (LAOs). The latter are also available in KSA.

#### IMPORT DEPENDENCY

- Regional demand of alcohol ether sulfates is around 75 thousand metric tons
- The region imports ~40-45 thousand metric tons of alcohol ether sulfate.

#### 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 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 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

# DEFINITIONS

#	SCORECARD SECTION	DEFINITIONS
1	<b>Market size</b>	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	<b>Business drivers</b>	A select number of factors that will influence future demand for the related product/service
3	<b>Investment highlights</b>	An overview of key financial metrics summarizing the investment opportunity along with the expected return based on the suggested investment size
4	<b>Value proposition</b>	Summary of key differentiators that position KSA as a strategic choice over other regional/global peers
5	<b>Market readiness</b>	An overview of KSA market structure, market maturity and level of participation by local and global players
6	<b>Global trends</b>	Latest business developments within the sector/product category
7	<b>Scalability and localization</b>	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	<b>Import dependency</b>	An overview of the countries from which Saudi Arabia is importing the product and their value/volume and share in total imports
9	<b>Value chain analysis</b>	The process or activities that would potentially need to be carried out to deliver the underlying product or service
10	<b>Key stakeholders</b>	Government institutions, organizations, and/or authorities that participate or influence the market for the underlying product/service
11	<b>Enablers</b>	Factors that enable investment in the underlying opportunity
12	<b>Cost of doing business in KSA</b>	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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