

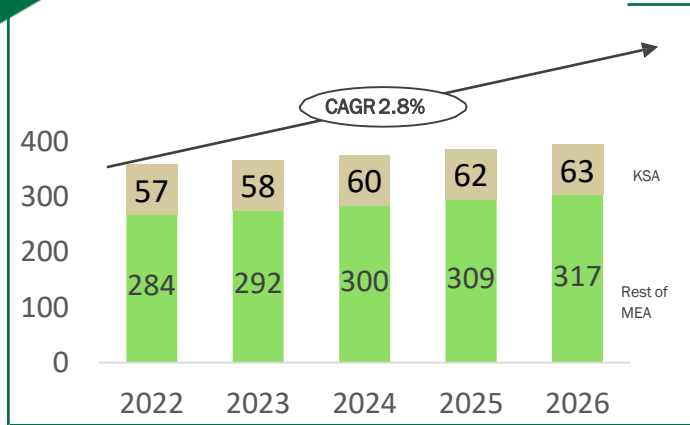
PHTHALATE ESTERS - PLASTICIZERS
INVESTMENT OPPORTUNITY
Specialty Chemicals



OPPORTUNITY DESCRIPTION: Opportunity to setup a production plant for plasticizers (phthalate esters)

DEMAND

MARKET SIZE, KTA



INVESTMENT HIGHLIGHTS

- Expected investment size of USD 15 Mn
- Plant capacity: 20 KTPA
- Expected IRR*: 10-15%
- Payback period*: 3-6 years
- Job Creation: ~ 37 Employees
- GDP Impact: ~ 9 Mn USD
- Location (Region): Jubail/Yanbu

INVESTMENT OVERVIEW

VALUE PROPOSITION

- Significant market size with limited local players make for an attractive area of investment
- Potential export opportunities exist in several markets in MENA Region
- KSA is one of the largest chemical producers in the world and contributes ~10% to the global output

KEY DEMAND DRIVERS

- Flexible polyvinyl chloride (PVC) accounts for 80-90% of world plasticizer consumption
- KSA remains one of the largest producers of PVC in ME region
- 62KT of plasticizers were imported into ME region in 2017 with total consumption of 268KT and slated to increase to 300KT by 2022
- Global consumption increasing from 4.9 million metric tons in 2017 to 5.2 million metric tons in 2022

RAW MATERIALS

- Phthalic anhydride (PA)
- Butyraldehyde/ Butanol
- 2- Ethylhexanol(2-EH)

MARKET OVERVIEW

GLOBAL TRENDS

- Phthalate esters, based on phthalic acid, are the main types of plasticizers used.
- Major phthalates include di(2-ethylhexyl)phthalate (DEHP), also known as dioctyl phthalate (DOP); diisononyl phthalate (DINP); diisodecyl phthalate (DIDP); and di(2-propylheptyl) phthalate (DPHP).
- Phthalates account for 65% of plasticizers consumed.
- Major global producers include UPC Group (Asia), ExxonMobil BASF, Shandong Qilu, Eastman, Nan Ya and Aekyung.



SUPPLY

SCALABILITY AND LOCALIZATION

Grade: Low Medium High

- Majority of plasticizers can be produced by simple esterification process
- Localization potential for further downstream products is available due to mature plastics industry with substantial production of PVC.

IMPORT DEPENDENCY

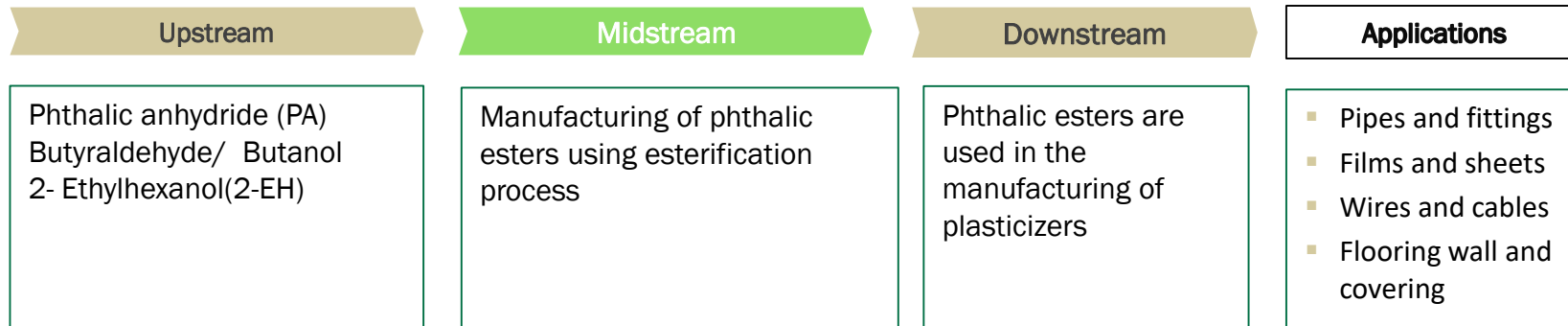
- About 15-17KT is imported into KSA and this is expected to grow at 2-4% annually

ENABLING FACTORS

ENABLERS & INCENTIVES

- Custom land options from RCJY AND Modon
- 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

VALUE CHAIN



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
Construction Costs (Indexed to US, % 0 is cheapest)	74
Ease of getting credit (0-100)	50

KEY STAKEHOLDERS



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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