

ALUMINUM FLUORIDE

MAADEN LOCALIZATION OPPORTUNITY CARD

ALUMINUM FLUORIDE

OPPORTUNITY SUMMARY

Case Summary

Current Market Usage

Aluminum fluoride is a consumable material used in aluminum smelting and is commonly utilized by aluminum producers.

Current Supply Structure

Saudi aluminum fluoride consumption is almost entirely import-based, indicating potential import replacement opportunities.

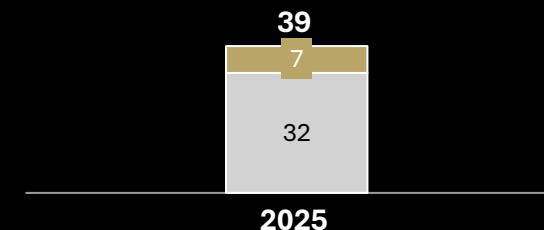
Supply Chain Considerations

Local production may improve delivered cost and supply reliability by potentially reducing freight exposure and lead times.

Indicative Market & Maaden Consumption

GCC demand, kmt (2025)

■ Maaden Demand ■ Rest of GCC Demand



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Localization Opportunity Overview

1

Existing Smelter Demand Base

Aluminum fluoride is a key input with limited alternatives in aluminum smelting, with demand directly linked to aluminum production volumes and relatively consistent consumption per ton.

2

Import-Dependent Market

Saudi aluminum fluoride demand is almost entirely supplied through imports, indicating potential for local production to partially replace imported volumes, subject to market conditions.

3

Energy-Related Cost Considerations

Production economics are driven by energy and acid inputs, where KSA's competitive power, utilities, and industrial infrastructure may support a competitive cost structure.

4

Delivered Cost & Supply Considerations

Local manufacturing may reduce exposure to international freight, port congestion, and long lead times, potentially improving delivered cost and operational reliability.

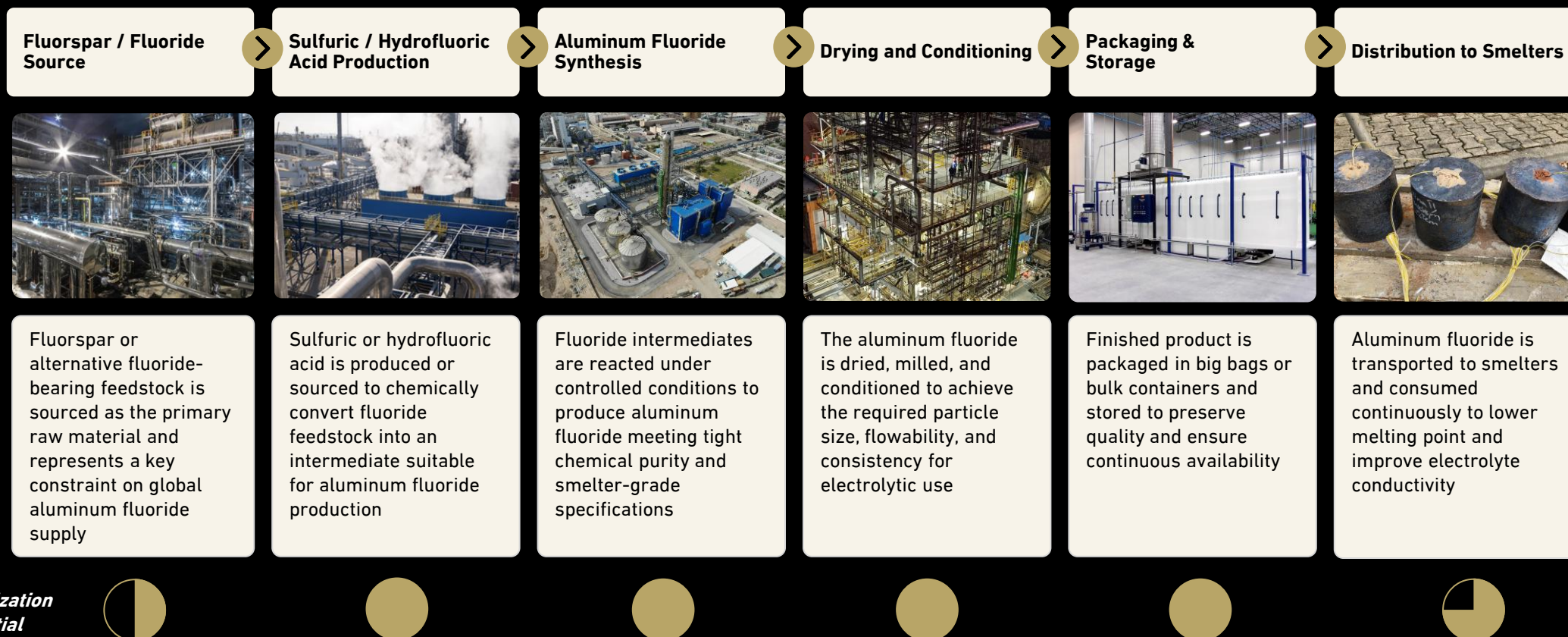
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Regional Market Presence

A Saudi-based aluminum fluoride plant may have the potential to serve regional aluminum smelters as supply-demand dynamics evolve.

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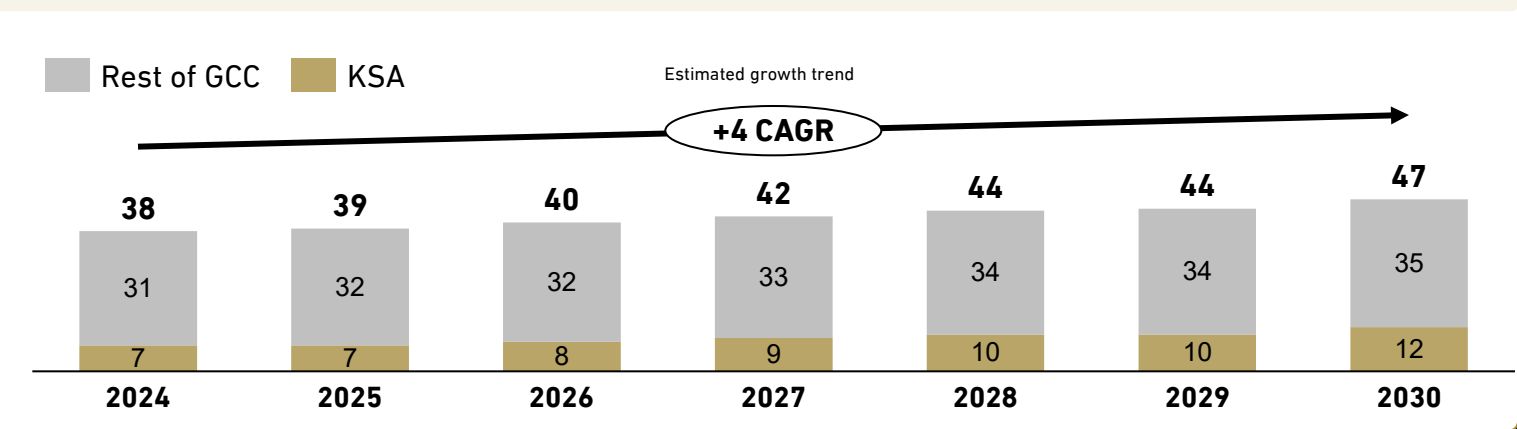
VALUE CHAIN



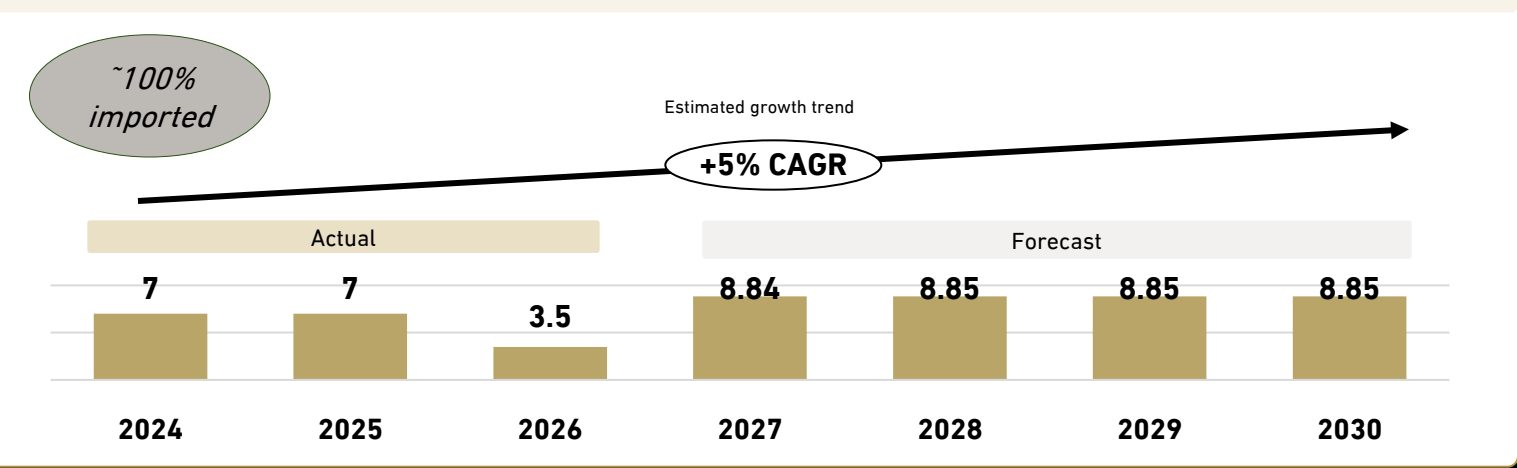
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MARKET DEMAND & SUPPLY

Market Demand, kmt



Maaden Demand, kmt



Market Trends & Demand Drivers

- 1 Growth in primary aluminum production is associated with increased aluminum fluoride consumption, with stable usage per ton of metal produced
- 2 Global aluminum fluoride supply remains concentrated, with Chinese exports tightening and potentially increasing reliance on alternative supply regions
- 3 Smelters are placing greater emphasis on consistent purity and particle size to improve energy efficiency and cell stability
- 4 Rising logistics costs and longer lead times are leading smelters to increasingly consider geographically closer and more reliable sources of supply

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The KSA ecosystem comprises six main categories, supported by key enablers

