

The internal product network represents a fundamental Feed Products Intermediates Sales Products source of economical advantages for new industrial projects. The integration effects resulting from the exchange of materials between the onsite companies improve their cost positions remarkably.

The backbone of this network is the refinery (TotalEnergies), the synthesis of caprolactam (DOMO), involving all stages of production beginning with benzol, and the manufacture of technical gases (Linde).

The refinery which has a partial oxidation and a methanol synthesis as an outlet for heavy residues, supplies methanol for the production of methylamines (Eastman). Carbon monoxide is an intermediate product in the production of methanol and is partially further processed to dimethyl formaldehyde (Eastman). Hydrogen sulfide is used for the production of inorganic products by a medium-sized company (Quadrimex).

The synthesis of caprolactam uses propene and sulfur from the refinery while oxygen and hydrogen are provided by the LINDE gas center.

The gas center and its core plants, the air separator and the steam reformer, provides pure oxygen and nitrogen for the partial oxidation and hydrogen for the hydrogen peroxide plant (ARKEMA).

## FEED PRODUCTS

- Acrylates
- Air
- Ammonia
- Benzene
- Bisphenol A
- Calcium oxide
- Chlorine
- Crude oil
- Demineralized water
- Diclopentadiene
- Ethylene
- Ethylene oxide
- Fatty acid
- Formaldehyde
- Glycerine
- Natural gas
- Paraffins
- Phosphorus trichloride
- Plant oils
- Polyamines
- Salt
- Styrene
- Sulfur
- Sulfur dioxide
- Titanium dioxide
- Various alcohols and solvents
- Various organic raw materials
- Vinyl acetate
- Wood

## INTERMEDIATES

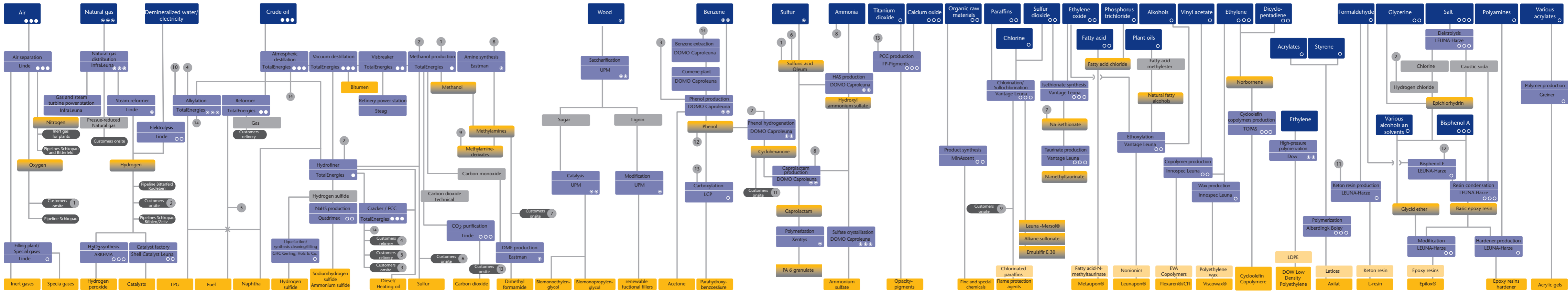
- Alkane sulfonate
- Ammonia
- Basic epoxy resins
- Benzene
- C4-fraction
- Caprolactam
- Carbon dioxide technical
- Carbon monoxide
- Caustic soda
- Chlorine
- Cyclohexanone
- Emulsifier E 30
- Epichlorohydrin
- Fatty acid chloride
- Fatty acid methylester
- FCC-Benzine
- Gas
- Glycide ether
- Hydrogen
- Hydrogen chloride
- Hydrogen sulfide
- Hydroxyl ammonium sulfate
- Leuna-Mersol®
- Lignin
- Methanol
- Methylamine
- Methylamine derivatives
- N-Methyltaurine
- Na-lsethionate
- Natural fatty alcohols
- Nitrogen
- Norbornene
- Oxygen
- PA 6 granulate
- Phenol
- Pressure-reduced Natural gas
- Propene/Propane
- Sugar
- Sulfur
- Sulfuric acid/Oleum

## SALES PRODUCTS

- Acetone
- Acetylene
- Alkan sulfonate
- Acrylic gels
- Ammonium sulfate
- Ammonium sulfide
- Axilat
- Basic epoxy resins
- Bio-monoethylene glycol
- Bio-monopropylene glycol
- Bitumen
- Caprolactam
- Carbon dioxide
- Catalysts
- Cyclohexanone
- Cycloolefin copolymers
- Diesel/Heating oil
- Dimethyl formamide
- DOW Low Density Polyethylene
- Emulsifier E 30
- Epichlorohydrin
- Epilox®
- Epoxy resins hardener
- Flexaren®/CFI
- Fatty acid chloride
- Fine and special chemicals
- Flame protection agents
- Fuel
- Glycidether
- Hydrogen
- Hydrogen peroxide
- Hydrogen sulfide
- Hydroxyl ammonium sulfate
- Inert gases
- L-resin
- Latices (Axilat)
- Leuna-Mersol®
- Leunapon®
- Metaupon®
- Methanol
- Methylamines
- Methylamine derivatives
- N-Methyltaurin
- Na-lsethionate
- Natural fatty alcohols
- Naphtha
- Nitrogen
- Norbornene
- Opacity pigments
- Oxygen
- PA 6 granulate
- Phenol
- p-hydroxy-benzoic acid
- Renewable functional fillers
- Sodium hydrogen sulfide
- Special gases
- Sulfur
- Sulfuric acid/Oleum
- Viscowax®

# LEUNA

## MAIN PRODUCT LINES



Status: 10.02.2023

**Legend**

- Feed product (Blue box)
- Sales product (Yellow box)
- Intermediate (Grey box)
- Feedstock of internal network (Grey circle)
- Product designation (Yellow box)
- Application (Grey box)
- Process designation (Purple box)
- Manufacturer/company (Purple box)

**Intermediates**

- 1 Oxygen
- 2 Hydrogen
- 3 Propene/Propane
- 4 C<sub>4</sub>-fraction
- 5 FCC-Benzine
- 6 Sulfur
- 7 Methylamine
- 8 Ammonia
- 9 Hydrogen chloride
- 10 Acid sulfur
- 11 Cyclohexanone
- 12 Phenol
- 13 CO<sub>2</sub>
- 14 Benzene

**Product quantity: [kt/a]**

- < 5 (Small circle)
- 5 to 10 (Medium circle)
- 10 to 50 (Large circle)
- 50 to 100 (Small circle with dot)
- 100 to 200 (Medium circle with dot)
- 200 to 500 (Large circle with dot)
- 500 to 1000 (Small circle with two dots)
- 1000 to 2000 (Medium circle with two dots)
- > 2000 (Large circle with two dots)