

WWW.INFRALEUNA.DE

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
- Dichlorethane
- 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
- Various organic raw materials
- Vinyl acetate

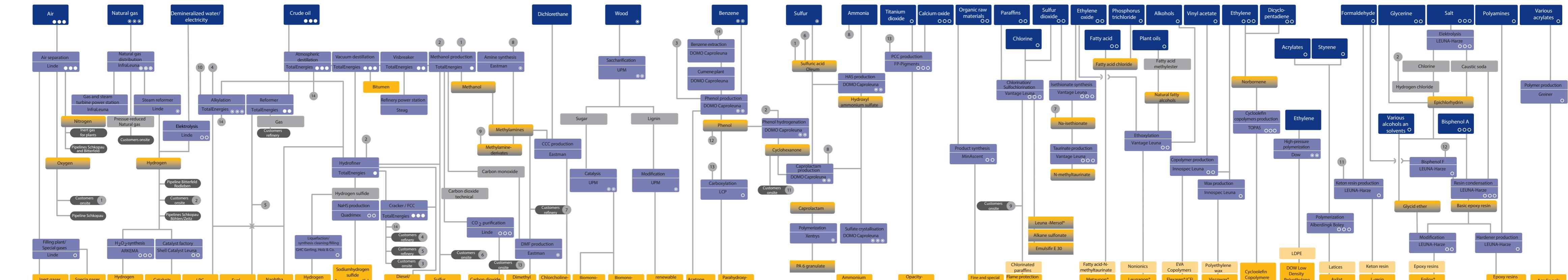
INTERMEDIATES

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

SALES PRODUCTS

- Hydrogen peroxide
- Hydrogen sulfide
- Hydroxyl ammonium sulfate
- Inert gases
- L-resin
- Latices (Axilat)
- Leuna-Mersol®
- Leunapon®
- Metaupon®
- Methanol
- Methylamines
- Methylamine derivatives
- N-Methyltaurin
- Na-Isethionate
- 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
- Sales product
- Intermediate
- Feedstock of internal network

Intermediates

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

Product quantity: [kt/a]

- | | |
|---------------|-----------------|
| ○ < 5 | ○ 50 to 100 |
| ○○ 5 to 10 | ○○ 100 to 200 |
| ○○○ 10 to 50 | ○○○ 200 to 500 |
| ● 500 to 1000 | ●● 1000 to 2000 |
| ●●● > 2000 | |