

NX CONSER™ C2 Derivatives

Pioneering adaptable plant design
for tailored MEA, DEA,
and TEA production

About NEXTCHEM

NEXTCHEM is MAIRE's company dedicated to Sustainable Technology Solutions. Leveraging our deep expertise in nitrogen, hydrogen, carbon capture, fuels, chemicals, and polymers, we deliver groundbreaking solutions and processes that fully enable the energy transition.

Building on the rich legacy of our group for over 70 years, we are dedicated to developing and offering technology solutions, processes, basic engineering designs, as well as proprietary equipment and catalysts, to drive global decarbonization efforts forward.

An advanced, well-proven technology

The advantages of NX CONSER technology, improved and updated by NX CONSER and its industrial or academic partners, are testified from more than 50 years of research and 20 years of commercial production in different sites worldwide.

Our solution for customized synthesis

NX CONSER special plant design allows a great flexibility in the production of MEA¹, DEA² and TEA³ and the relevant ratio.

The possibility to maximize one of the three products, without major plant modifications, is available thanks to the latest design improvement developed by NX CONSER.

In NX CONSER GE⁴ process, the design of the reactor ensures great flexibility in the distribution of the products, allowing to adapt the production as per market requirements.

1. MEA = Monoethanolamine
2. DEA = Diethanolamine
3. TEA = Triethanolamine
4. GE = Glycol Ethers

NX CONSER C2 Derivatives™

Leading the way
in advanced production

Applications

Ethanolamine

- MEA – DEA – TEA:
In pharmaceutical industry
cleaning-antirusting agent
- Surfactants
- Gas Purifications
- Textiles

Glycol Ethers

- GLYCOL METHYL ETHER:
Primarily solvents; higher versions
in brake fluids.
- GLYCOL ETHYL ETHERS:
Dissolve oils, resins, etc.; higher
versions in brake fluids.
- GLYCOL BUTYL ETHERS:
Solvent for paints/inks; anti-icing
agents; higher versions for
miscible paints and brake fluids.

Your benefits

- 1 Product distribution high flexibility with the possibility to maximize a desired product
- 2 No gaseous emissions (except vent gas - mainly air - from distillation columns)
- 3 Superior product quality with efficient utility consumption, effortless start-up and shut down, and seamless continuous operation
- 4 Cost-effective investment with highly efficient distillate separation, energy savings, and minimal catalyst use

Technical overview

a

Production, recovery and purification of ethanolamines by non-catalytic reaction of ethylene oxide and ammonia.

b

Several plug flow reactors (pfr), each followed by an intercooling step to control temperature below 60°C, in order to limit by-products formation.

c

Production, recovery and purification of mono, di and tri glycol ethers by homogeneous catalytic reaction between butyl alcohol and ethylene oxide.

d

NX CONSER GE Technology based on tubular type reactor with unconverted alcohol recovery and its recycle to reaction section.

