

GAS/SPEC MDEA Specialty Amine

Methyldiethanolamine (MDEA) is supplied globally by INEOS for use in applications requiring this molecule. Typical applications include gas treating, and as a chemical intermediate for detergent and fabric softener manufacture. INEOS has established a global supply network of storage locations and distributor partners to meet local delivery needs.

For gas treating applications requiring technical services, GAS/SPEC* SS is also supplied.

* GAS/SPEC is a trademark and service mark of INEOS LLC.

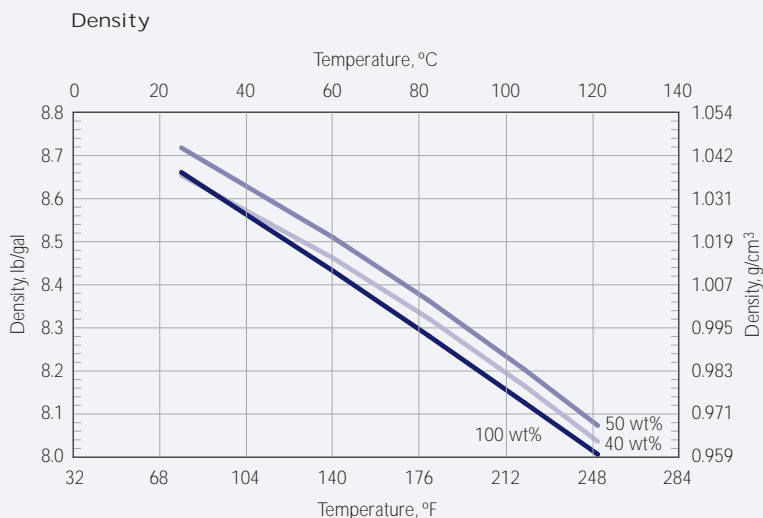
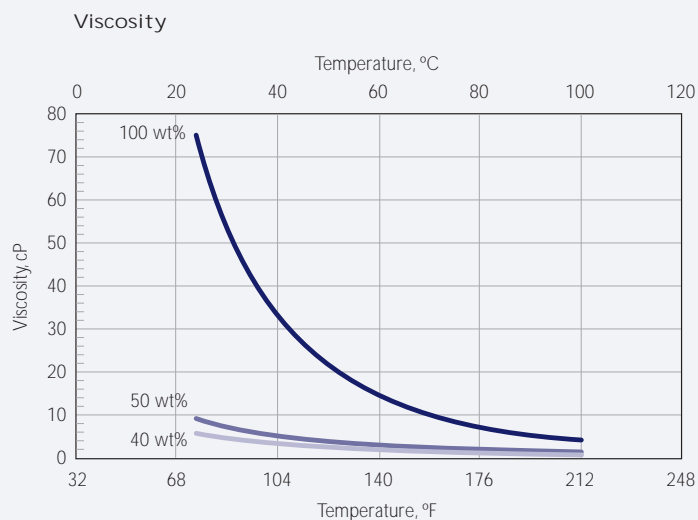
APPLICATIONS

- Gas Treating Applications
- Urethanes Production
- Paint and Coating Additives
- Emulsifer/Surface End Uses

PHYSICAL PROPERTIES ¹

Specific Gravity @ 25/25° C	1.04
Boiling Point @ 760 mmHg	247.0 °C
	476.6 °F
Freezing Point	-22.5 °C
	-8.5 °F
Latent Heat of Vaporization	200.2 Btu/lb _m
	111.0 Cal/g
Flash Point (PMCC)	127 °C
	260.6 °F

¹Typical properties, not to be construed as specifications



PRODUCT SERVICES

INEOS offers a broad line of services to our specialty amine customers, including:

- superior simulation capabilities
- troubleshooting consultations
- on-site start-up and optimization
- solvent analysis and interpretation
- local stocking & suppl.

MATERIALS OF CONSTRUCTION

The preferred material for storage of MDEA is 304L or 316L stainless steel. Carbon steel tanks are also satisfactory, although discoloration and iron in the amine may occur. Nitrogen padding of the tanks is recommended to prevent oxidation and discoloration of the amine during extended storage. The amine can also be stored in high-density polyethylene (HDPE) or polypropylene (HDPP).

Materials to avoid include:

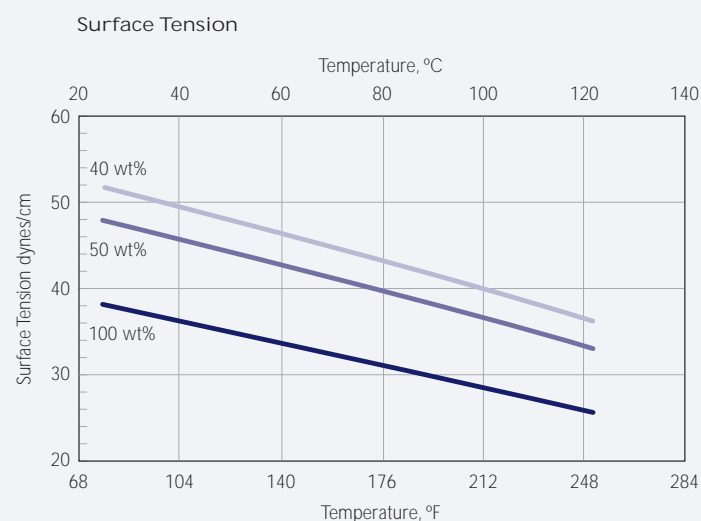
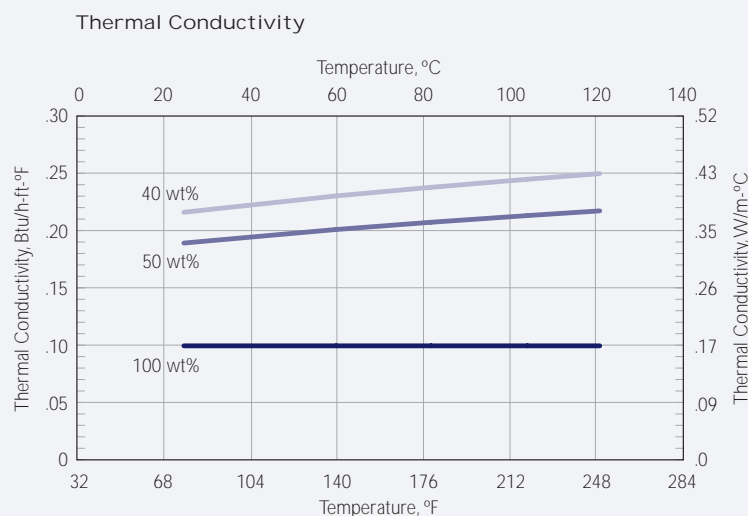
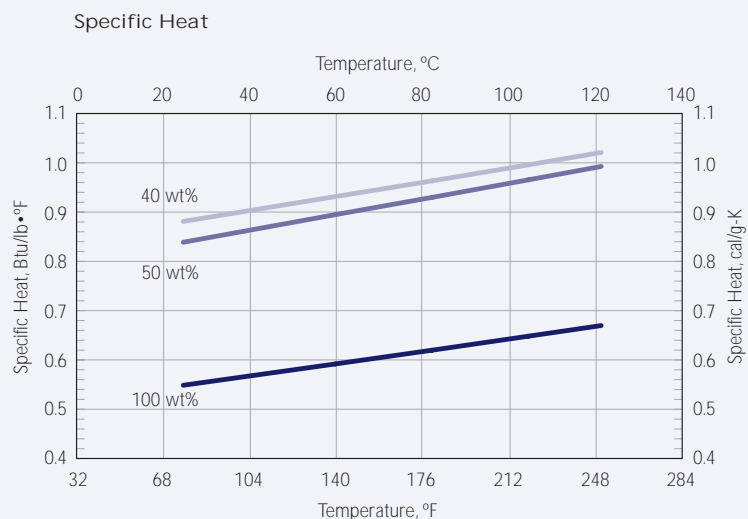
- Aluminum
- Copper
- Brass
- Copper alloy

STORAGE TEMPERATURE

- The recommended minimum temperature for storing and pumping 100% MDEA is 20 °F (-7 °C).
- Steam tracing and insulation may be required in cold weather.

HANDLING AND SAFETY

- MDEA can cause serious injury to the eyes and may result in permanent eye injury. If accidental contact with the eyes occurs, flush them thoroughly with water and seek medical attention.
- Single-dose oral toxicity of MDEA is low.
- Swallowing large amounts of MDEA may cause severe burns to the mouth, throat, and digestive tract. If accidental ingestion occurs seek medical attention.
- Accidental ingestion of small amounts of MDEA is not expected to cause injury.
- May cause irritation to the skin. Occasional brief contact with the skin should be washed off immediately and should have few adverse effects.
- If MDEA is heated or a mist produced, concentrations may be sufficient to cause irritation to the upper respiratory tract.
- Consult product Material Safety Data Sheet for more details.



The following precautions should be observed when the possibility of exposure exists:

- A safety shower and eyewash facility located nearby
- Chemical goggles
- Protective clothing, including chemically resistant gloves
- A well-ventilated work area

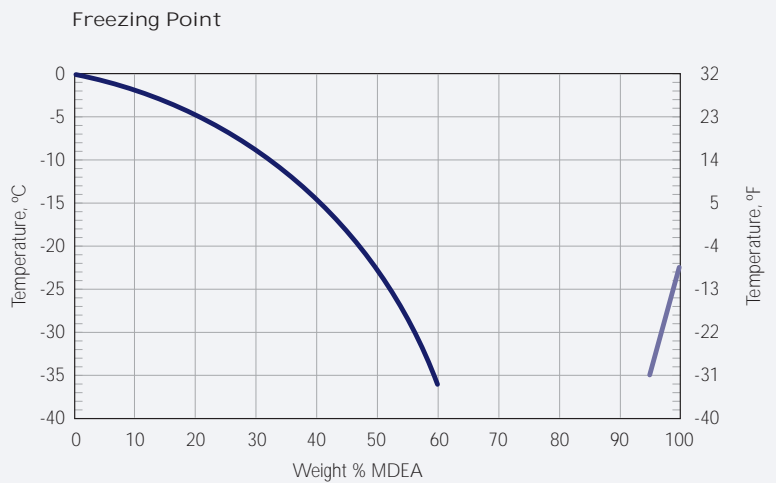
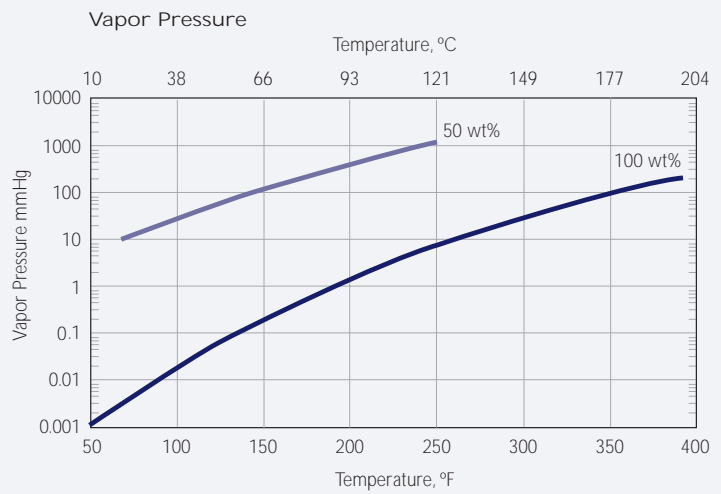
Accidental Release

- Clear non emergency personnel from area.
- PROTECT THE ENVIRONMENT: Keep out of sewers, storm drains, surface waters and soil.
- Contain spill if possible. Clean up with a non-combustible absorbent. Do not use sawdust.

REGULATORY

Regulatory requirements may vary for different locations. Contact your INEOS representative for more information.

- MDEA is not considered hazardous according to the guidelines of the U.S. Department of Transportation (DOT).
- MDEA, as sold, contains no chemical subject to SARA Title III Section 313 supplier notification requirements.
- The export of this product is regulated under the provisions of the Chemical Weapons Convention.



GAS/SPEC

Since 1982, the GAS/SPEC name has represented a special focus on the products, technology and service to chemically remove acid gases from process streams. The GAS/SPEC business unit has been continuously headquartered in Houston, Texas, with its major technical facility in Freeport, Texas.

The family of specialty amines offered by the GAS/SPEC Technology Group, all based on MDEA technology, provides custom H₂S and CO₂ removal in amine treating operations. The GAS/SPEC products and technology are exclusively offered by INEOS LLC and its specialized distributors.

The GAS/SPEC Technology Group is dedicated to achieving the highest degree of customer satisfaction globally through the application of the best available technology through the supply of cost-effective products and services. Other companies offer MDEA based products, some even attempting to emulate GAS/SPEC with similar sounding names... But only products with the GAS/SPEC name bring you the formulations, technology and service you are used to.

INEOS LLC is a part of INEOS Oxide.

INEOS Oxide manufactures a full range of products based on its production of ethylene oxide.

INEOS Oxide

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