Technical Bulletin

MONOETHANOLAMINE LFG-85%
[CAS 141-43-5]

DESCRIPTION
Monoethanolamine LFG-85% is a low-freeze grade of monoethanolamine. It is an aqueous blend designed to provide a lower freeze point product for those who can tolerate the presence of water in their application. Freezing will occur at approximately -10°C versus the 10°C for monoethanolamine.

SALES SPECIFICATIONS

<table>
<thead>
<tr>
<th>Property</th>
<th>Specifications</th>
<th>Test Method*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear and substantially free of suspended matter</td>
<td>ST-30.1</td>
</tr>
<tr>
<td>Color, Pt-Co</td>
<td>50 max.</td>
<td>ST-30.12</td>
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<tr>
<td>Monoethanolamine, wt%</td>
<td>83 – 86</td>
<td>ST-5.5</td>
</tr>
<tr>
<td>Water, wt%</td>
<td>14 - 17</td>
<td>ST-31.53, 6</td>
</tr>
</tbody>
</table>

*Methods of Test are available from Huntsman Corporation upon request.

ADDITIONAL INFORMATION

Regulatory Information
DOT/TDG Classification
Ethanolamine solution
Hazard Class 8, UN 2491
Packing Group III
Corrosive
HMIS Code 3-1-0
TSCA Inventory Yes
WHMIS Classification E
Canadian DSL Yes

Typical Values
Diethanolamine, wt% ≤0.08
pH 12
Specific Gravity, 20/20°C 1.03
Weight, 20°C, lb/gal 8.5
Viscosity, cSt, 37.7°C < 20
TOXICITY AND SAFETY
For information on the toxicity and safe handling of this product, please read the Material Safety Data Sheet prior to use of the product.

HANDLING AND STORAGE
Monoethanolamine LFG-85% may be satisfactorily stored in stainless steel tanks using stainless steel pipes and pumps.

For longer term color stability, it is recommended that the product be stored under an inert atmosphere. Solid sediment may form upon standing. There should be circulation in the storage vessel to keep solids suspended.

Low pressure steam coils in storage tanks and heat tracing of transfer lines should be provided in cases where low environmental temperatures may make pumping of the product difficult.

SHIPPING DATA
Product is available in tank cars, tank wagons and drums. Small samples are available by contacting our sample department at 1-800-662-0924.

BIODEGRADABILITY AND ENVIRONMENTAL SAFETY
Monoethanolamine LFG-85% undergoes moderate biodegradation and is not expected to be persistent in the environment.