TRIETHANOLAMINE 99% LFG 85%
[CAS 102-71-6]

STRUCTURE
\[
\begin{align*}
\text{CH}_2\text{CH}_2\text{OH} \\
\text{N-CH}_2\text{CH}_2\text{OH} \\
\text{CH}_2\text{CH}_2\text{OH}
\end{align*}
\]

DESCRIPTION
Triethanolamine-99% LFG 85% is a low-freeze grade triethanolamine. It is an aqueous blend designed to provide a lower freeze point product for those who can tolerate the presence of water in their applications. Freezing will occur at approximately –5°C versus the 21°C expected from triethanolamine.

SALES SPECIFICATIONS

<table>
<thead>
<tr>
<th>Property</th>
<th>Specifications</th>
<th>Test Method*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance, 30°C</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>
</tr>
<tr>
<td>Triethanolamine, wt%</td>
<td>83 - 87</td>
<td>Loading Measure</td>
</tr>
<tr>
<td>Water, wt%</td>
<td>13 - 17</td>
<td>Loading Measure</td>
</tr>
</tbody>
</table>

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

ADDITIONAL INFORMATION

Regulatory Information
See MSDS for inventory status and other regulatory information.

Typical Properties
- Boiling point, 760 mm Hg, °C: 100
- Diethanolamine, wt%: <0.09
- Melting point, °C: -5
- pH: 10.8
- Viscosity, cSt, 40°C: 75
- Specific Gravity, 20/20°C: ~1.1230
- Weight, 20°C, lb/gal: 9.36
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
Triethanolamine-99% 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.

BIODEGRADABILITY AND ENVIRONMENTAL SAFETY
Triethanolamine-99% LFG 85% undergoes moderate biodegradation and is not expected to be persistent in the environment.