SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Triethanolamine 85% LF
Product Use Description: Intermediate, Cleaning solutions.

Manufacturer or supplier's details
Company: Deep South Chemical, Inc.
Address: 229 Millstone Road
Broussard, LA 70518
United States of America

Emergency telephone number:
Transport North America: CHEMTREC 800.424.9300

Additional Information:
Responsible Party: Product Safety Group
E-Mail: info@deep-south-chemical.com
SDS Requests: 1-337-837-9931
Website: www.deep-south-chemical.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Skin irritation: Category 2
Serious eye damage: Category 1
Carcinogenicity: Category 2
Specific target organ toxicity - repeated exposure (Oral): Category 2 (Liver, Blood, Kidney)

GHS Label element
Hazard pictograms:

Signal word: Danger
Hazard statements:
H315 Causes skin irritation.
H318 Causes serious eye damage.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

Precautionary statements:

Prevention:
P201 Obtain special instructions before use.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P280 Wear eye protection/ face protection.
P280 Wear protective gloves.
P281 Use personal protective equipment as required.

Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.

Storage:
P405 Store locked up.

Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Aggravated Medical Condition: None known.

Symptoms of Overexposure: Severe irritation

Carcinogenicity:

IARC: Group 2B: Possibly carcinogenic to humans

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Safety Data Sheet
Triethanolamine 85% LF

Revision Date: 02/09/2015

NTP
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Emergency Overview

<table>
<thead>
<tr>
<th>Appearance</th>
<th>viscous, liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>colourless, light yellow</td>
</tr>
<tr>
<td>Odour</td>
<td>ammoniacal</td>
</tr>
<tr>
<td>Hazard Summary</td>
<td>No information available.</td>
</tr>
</tbody>
</table>

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Chemical Name</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>102-71-6</td>
<td>Triethanolamine</td>
<td>70 - 100</td>
</tr>
<tr>
<td>111-42-2</td>
<td>Diethanolamine</td>
<td>1 - 20</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

General advice
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled
If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact
If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact
Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed
Clean mouth with water and drink afterwards plenty of water.
Keep respiratory tract clear.
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed
: Severe irritation

Notes to physician
: Treat symptomatically

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media
: Use an extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media
: High volume water jet

Specific hazards during firefighting
: Do not allow run-off from fire fighting to enter drains or water courses. During a fire, irritating or toxic decomposition products may be generated.

Hazardous combustion products
: Carbon dioxide (CO2)
Carbon monoxide
Nitrogen oxides (NOx)

Specific extinguishing methods
: Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Further information
: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters
: Wear self-contained breathing apparatus for firefighting if necessary.

NFPA Flammable and Combustible Liquids Classification:
Combustible Liquid Class III B

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and
: Use personal protective equipment.
emergency procedures

Environmental precautions

- Prevent product from entering drains.
- Prevent further leakage or spillage if safe to do so.
- If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up

- Neutralise with acid.
- Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
- Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling

- Do not breathe vapours/dust.
- Avoid contact with skin and eyes.
- For personal protection see section 8.
- Smoking, eating and drinking should be prohibited in the application area.
- To avoid spills during handling keep bottle on a metal tray.
- Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage

- Keep container tightly closed in a dry and well-ventilated place.
- Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Components</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>102-71-6</td>
<td>Triethanolamine</td>
<td>TWA</td>
<td>$5 \text{ mg/m}^3$</td>
<td>ACGIH</td>
</tr>
<tr>
<td>111-42-2</td>
<td>Diethanolamine</td>
<td>TWA (Inhalable fraction and vapor)</td>
<td>$1 \text{ mg/m}^3$</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>$3 \text{ ppm}$, $15 \text{ mg/m}^3$</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>$3 \text{ ppm}$, $15 \text{ mg/m}^3$</td>
<td>OSHA P0</td>
</tr>
</tbody>
</table>
**Personal protective equipment**

Respiratory protection: No personal respiratory protective equipment normally required.

Hand protection

Remarks: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection: Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection: impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the workplace.

Hygiene measures: When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

---

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>viscous, liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>colourless, light yellow</td>
</tr>
<tr>
<td>Odour</td>
<td>ammoniacal</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>11 - 11.7 @ 2 % 15.8 - 20 °C (60.4 - 68 °F)</td>
</tr>
<tr>
<td>Freezing Point (Melting point/freezing point)</td>
<td>-5 - 21 °C (23 - 70 °F) (1,013 hPa)</td>
</tr>
<tr>
<td>Boiling Point (Boiling point/boiling range)</td>
<td>119.1 - 336.1 °C (246.4 - 637.0 °F) (1013 hPa)</td>
</tr>
<tr>
<td>Flash point</td>
<td>138 - 194.4 °C (280 - 381.9 °F) (1,013 hPa)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>&lt; 0.1 n-Butyl Acetate</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
</tbody>
</table>
### Safety Data Sheet

**Triethanolamine 85% LF**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burning rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>7.2 % (V)</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>3.6 % (V)</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>0.0002 - 9.7 mmHg @ 20 - 21 ºC (68 - 70 ºF)</td>
</tr>
<tr>
<td>Relative vapour density</td>
<td>5.1</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.119 - 1.125 @ 20 ºC (68 ºF) Reference substance: (water = 1)</td>
</tr>
<tr>
<td>Density</td>
<td>1.125 g/cm³ @ 20 ºC (68 ºF)</td>
</tr>
<tr>
<td>Bulk density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility (ies)</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>1,000 g/l completely miscible</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>log Pow: -2.3</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>324 - 330 ºC</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>&gt; 120 ºC</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>934 mPa.s @ 20 ºC (68 ºF)</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>182 mm²/s @ 40 ºC (104 ºF)</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>The substance or mixture is not classified as oxidizing.</td>
</tr>
</tbody>
</table>

---

**SECTION 10. STABILITY AND REACTIVITY**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>No dangerous reaction known under conditions of normal use.</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>Stable under normal conditions.</td>
</tr>
</tbody>
</table>
Safety Data Sheet
Triethanolamine 85% LF

Possibility of hazardous reactions: No hazards to be specially mentioned.

Conditions to avoid:
- Freezing temperatures.
- Elevated temperatures
- Possible emission of gaseous decomposition products may lead to a dangerous pressure build-up.
- Exposure to moisture.
- Exposure to light.

Incompatible materials:
- Strong acids
- Strong oxidizing agents
- Halogenated compounds
- Aluminium
- Halogenated hydrocarbon
- Zinc
- Galvanized metals
- Nitrites and other nitrosating agents
- Copper
- Tin
- Strong bases
- Acids
- Oxidizing agents

Hazardous decomposition products:
- Hydrogen, by reaction with metals
- Carbon dioxide and carbon monoxide
- Nitrogen oxides (NOx)
- Ammonia
- Thermal decomposition can lead to release of irritating gases and vapours.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity: Acute toxicity estimate: > 5,000 mg/kg
- Method: Calculation method

Components:

102-71-6:

Acute oral toxicity: LD50 (rat, male and female): 6,400 mg/kg
- Method: OECD Test Guideline 401
- GLP: no

Acute inhalation toxicity: Remarks: No data available
Acute dermal toxicity: LD50 (rabbit): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: no

**111-42-2:**

Acute oral toxicity: LD50 (rat): 780 mg/kg
Assessment: The component/mixture is moderately toxic after single ingestion.

Acute inhalation toxicity: Remarks: No data available

Acute dermal toxicity: LD50 (rabbit): > 5,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

**Skin corrosion/irritation**

**Product:**
Remarks: Irritating to skin.

**Components:**

**102-71-6:**
Species: rabbit
Method: OECD Test Guideline 404
Result: Irritating to skin.
GLP: no

**111-42-2:**
Species: rabbit
Result: Irritating to skin.

**Serious eye damage/eye irritation**

**Product:**
Remarks: Risk of serious damage to eyes.

**Components:**

**102-71-6:**
Species: rabbit
Result: Irritating to eyes.
Method: OECD Test Guideline 405

**111-42-2:**
Species: rabbit
Result: Risk of serious damage to eyes.
Safety Data Sheet
Triethanolamine 85% LF

Respiratory or skin sensitisation

**Components:**

**102-71-6:**
Test Type: Maximization test  
Species: guinea pig  
Method: OECD Test Guideline 406  
Result: Did not cause sensitisation on laboratory animals.  
GLP: yes

**111-42-2:**
Test Type: Maximisation Test (GPMT)  
Species: guinea pig  
Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

**Components:**

**102-71-6:**
Genotoxicity in vitro  
: Test Type: Ames test  
Test species: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative  
GLP: No data available

**111-42-2:**
Genotoxicity in vitro  
: Test Type: Mammalian cell gene mutation assay  
Test species: Mouse lymphoma cells  
Metabolic activation: with and without metabolic activation  
Result: negative

Genotoxicity in vivo  
: Test Type: In vivo micronucleus test  
Test species: mouse  
Application Route: Dermal  
Exposure time: 13 wks  
Result: negative

**Germ cell mutagenicity-Assessment:**  
Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

**Components:**

**102-71-6:**
Carcinogenicity - Assessment: Carcinogenicity classification not possible from current data.

111-42-2:
Species: rat
Application Route: Dermal
Exposure time: 103 wks
Frequency of Treatment: 5 days/week
NOAEL: 64 mg/kg body weight

Method: OECD Test Guideline 451

Carcinogenicity - Assessment: Carcinogenicity classification not possible from current data.

Reproductive toxicity

Components:

102-71-6:
Effects on fertility: Species: rat, male and female
Application Route: oral
Dose: 100, 300, 1000 mg/kg bw/day
General Toxicity - Parent: NOAEL: > 1,000 mg/kg bw
Fertility: NOAEL: > 1,000 mg/kg
Early Embryonic Development: NOAEL: 300 mg/kg
Symptoms: reduced litter size
Method: OECD Test Guideline 421
GLP: yes

Effects on foetal development: Species: rat
Application Route: oral
Dose: 100, 300, 1000 mg/kg bw/day
General Toxicity Maternal: NOAEL: > 1,000 mg/kg bw
Developmental Toxicity: NOAEL: 300 mg/kg bw
GLP: yes

Reproductive toxicity - Assessment: No evidence of adverse effects on sexual function and fertility, and on development, based on animal experiments.

111-42-2:
Effects on fertility: Test Type: Two-generation study
Species: rat
Application Route: Oral
Fertility: NOAEL: 300 mg/kg body weight
Symptoms: Reduced fertility
Remarks: Information given is based on data obtained from similar substances.

Effects on foetal development: Species: rat
Safety Data Sheet

Triethanolamine 85% LF

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Application Route: Inhalation
Duration of Single Treatment: 10 d
Frequency of Treatment: 6 hr/day
Teratogenicity: NOAEC: 0.2 mg/L

Reproductive toxicity - Assessment:
Fertility classification not possible from current data.
Embryotoxicity classification not possible from current data.

STOT - single exposure
Product: No data available
Components:
102-71-6: No data available
111-42-2: No data available

STOT - repeated exposure
Product: No data available
Components:
102-71-6: No data available

111-42-2:

<table>
<thead>
<tr>
<th>Exposure routes:</th>
<th>Target Organs:</th>
<th>Assessment:</th>
<th>Remarks:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>Liver, Blood, Kidney</td>
<td>The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2., May cause damage to organs through prolonged or repeated exposure.</td>
<td></td>
</tr>
</tbody>
</table>

Repeated dose toxicity

Components:
102-71-6:
Species: rat, male and female
NOAEL: 1,000 mg/kg
Application Route: Oral
Exposure time: 91 d
Number of exposures: daily
Dose: 0; 250; 500; 1000 mg/kg bw
Method: OECD Test Guideline 408
GLP: no

Species: rat, male and female
NOAEL: 0.5 mg/l
Application Route: Inhalation
Exposure time: 28 d
Number of exposures: 6 h/d, 5 d/wk
Dose: 0.02; 0.1; 0.5 mg/l
Method: OECD Test Guideline 412
GLP: yes
Symptoms: Local irritation

Species: rat, male and female
NOAEL: 125 mg/kg
Application Route: Dermal
Exposure time: 90 d
Number of exposures: 5 d/wk
Dose: 125; 250; 500; 1000; 2000 mg/k
Method: OECD Test Guideline 411
GLP: No data available
Symptoms: Local irritation

111-42-2:
Species: rat
LOAEL: 320
Application Route: Oral
Exposure time: 13 wks
Number of exposures: daily
Symptoms: Blood disorders

Aspiration toxicity

Product:
No aspiration toxicity classification

Components:

102-71-6:
No aspiration toxicity classification

111-42-2:
No aspiration toxicity classification

Further information

Product:
Remarks: No data available
SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

**Components:**

**102-71-6:**
- Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
  - Exposure time: 96 h
  - Test Type: flow-through test

- Toxicity to daphnia and other aquatic invertebrates: EC50 (Ceriodaphnia dubia): > 100 mg/l
  - Exposure time: 48 h
  - Test Type: static test

- Toxicity to algae: EC50 (Desmodesmus subspicatus): > 100 mg/l
  - End point: Growth rate
  - Exposure time: 72 h
  - Test Type: static test

- Toxicity to bacteria: EC50 (activated sludge): 1,000 mg/l
  - Exposure time: 3 h
  - Method: OECD Test Guideline 209

**111-42-2:**
- Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
  - Exposure time: 96 h
  - Test Type: static test

- Toxicity to daphnia and other aquatic invertebrates: EC50 (Ceriodaphnia dubia): 30.1 mg/l
  - Exposure time: 48 h
  - Test Type: static test

- Toxicity to algae: EC50 (Pseudokirchneriella subcapitata (Selenastrum capricornutum)): 2.2 mg/l
  - End point: Growth rate
  - Exposure time: 96 h
  - Test Type: static test

- Toxicity to bacteria: EC20 (activated sludge): 1,000 mg/l
  - End point: Respiratory rate
  - Exposure time: 30 min
  - Test Type: Static
  - Method: OECD Test Guideline 209

**Ecotoxicology Assessment**

**Acute aquatic toxicity**: Toxic to aquatic life.
Chronic aquatic toxicity: Toxic to aquatic life with long lasting effects.

Persistence and degradability

**Product:**
Biodegradability
- Biodegradation: 97 %
- Exposure time: 28 d
- Remarks: Readily biodegradable, according to appropriate OECD test.

**Components:**

**102-71-6:**
Biodegradability
- Result: Readily biodegradable.
- Biodegradation: 97 %
- Exposure time: 28 d
- Method: OECD Test Guideline 301A

Theoretical Oxygen Demand (ThOD)
- Value: 0.00204 mg/g

**111-42-2:**
Biodegradability
- Type: aerobic
- Inoculum: activated sludge
- Biodegradation: 93 %
- Exposure time: 28 d

Bioaccumulative potential

**Product:**
Bioaccumulation
- Bioconcentration factor (BCF): < 3.9
- Remarks: The substance has low potential for bioaccumulation.

**Components:**

**102-71-6:**
Bioaccumulation
- Species: Cyprinus carpio (Carp)
- Bioconcentration factor (BCF): 3.9

Partition coefficient: n-octanol/water
- Remarks: No data available

**111-42-2:**
Partition coefficient: n-octanol/water
- log Pow: -2.18

Mobility in soil
- No data available
Other adverse effects
No data available

**Product:**
Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information: No data available

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**
Waste from residues: Dispose of in accordance with all applicable local, state and federal regulations.
For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Deep South Chemical, Inc at 337-837-9931.

Contaminated packaging: Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

**SECTION 14. TRANSPORT INFORMATION**

**IATA (International Air Transport Association):** UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (TRIETHANOLAMINE, DIETHANOLAMINE), 9, III, Flash Point: 138 - 194.4 °C (280 - 381.9 °F)

**IMDG (International Maritime Dangerous Goods):** UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (TRIETHANOLAMINE, DIETHANOLAMINE), 9, III

**DOT (Department of Transportation):** UN3082, Environmentally hazardous substances, liquid, n.o.s., (TRIETHANOLAMINE, DIETHANOLAMINE), 9, III

**Special Notes:** Class 9, Packing Group III when material is shipped in quantities in one package at or above the Reportable
Safety Data Sheet

Triethanolamine 85% LF

Revision Date: 04/15/2015

Quantity and when no other hazard class applies; otherwise, not regulated.

SECTION 15. REGULATORY INFORMATION

OSHA Hazards: Carcinogen, Harmful by ingestion., Moderate skin irritant, Severe eye irritant

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethanolamine</td>
<td>111-42-2</td>
<td>100</td>
<td>667</td>
</tr>
</tbody>
</table>

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards: Chronic Health Hazard
Acute Health Hazard

SARA 302: SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: The following components are subject to reporting levels established by SARA Title III, Section 313:

111-42-2 Diethanolamine

Clean Air Act
The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

111-42-2 Diethanolamine %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. Clean-Water Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations
Safety Data Sheet

Triethanolamine 85% LF

Revision Date: 04/15/2015

Massachusetts Right To Know

| 102-71-6 | Triethanolamine | 70 - 100 % |
| 111-42-2 | Diethanolamine  | 1 - 20 %   |

Pennsylvania Right To Know

| 102-71-6 | Triethanolamine | 70 - 100 % |
| 7732-18-5| Water           | 1 - 20 %   |
| 111-42-2 | Diethanolamine  | 1 - 20 %   |

New Jersey Right To Know

| 102-71-6 | Triethanolamine | 70 - 100 % |
| 7732-18-5| Water           | 1 - 20 %   |
| 111-42-2 | Diethanolamine  | 1 - 20 %   |

California Prop 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

| 111-42-2 | Diethanolamine |

The components of this product are reported in the following inventories:

| Switzerland. New notified substances and declared preparations | y (positive listing) |
| (The formulation contains substances listed on the Swiss Inventory) |
| United States TSCA Inventory | y (positive listing) |
| (On TSCA Inventory) |
| Canadian Domestic Substances List (DSL) | y (positive listing) |
| (All components of this product are on the Canadian DSL.) |
| Australia Inventory of Chemical Substances (AICS) | y (positive listing) |
| (On the inventory, or in compliance with the inventory) |
| New Zealand. Inventory of Chemical Substances | y (positive listing) |
| (On the inventory, or in compliance with the inventory) |
| Japan. ENCS - Existing and New Chemical Substances Inventory | y (positive listing) |
| (On the inventory, or in compliance with the inventory) |
## SECTION 16. OTHER INFORMATION

### Further information

**NFPA:**

<table>
<thead>
<tr>
<th>Flammability</th>
<th>Health</th>
<th>Physical Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>0</td>
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</tbody>
</table>

Special hazard.

**HMIS III:**

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>3*</th>
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<tr>
<td>FLAMMABILITY</td>
<td>1</td>
</tr>
<tr>
<td>PHYSICAL HAZARD</td>
<td>0</td>
</tr>
</tbody>
</table>

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suita-
Safety Data Sheet

Triethanolamine 85% LF

Revision Date: 04/15/2015

ble to their circumstances. This MSDS has been prepared by Deep South Chemical, Inc.
EHS Product Safety Department (1-337-837-9931) info@deep-south-chemical.com

Material number:
16056724, 16056723, 16027676, 16024615, 770825, 601588, 596459, 593346, 568349, 89051, 72067, 54586, 88015

<table>
<thead>
<tr>
<th>Key or legend to abbreviations and acronyms used in the safety data sheet</th>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Government Industrial Hygienists</td>
<td>LD50</td>
</tr>
<tr>
<td>AICS</td>
<td>Australia, Inventory of Chemical Substances</td>
<td>LOAEL</td>
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<tr>
<td>DSL</td>
<td>Canada, Domestic Substances List</td>
<td>NFPA</td>
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<tr>
<td>NDSL</td>
<td>Canada, Non-Domestic Substances List</td>
<td>NIOSH</td>
</tr>
<tr>
<td>CNS</td>
<td>Central Nervous System</td>
<td>NTP</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstract Service</td>
<td>NZIoC</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration</td>
<td>NOAEL</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration 50%</td>
<td>NOEC</td>
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<tr>
<td>EGEST</td>
<td>EOSCA Generic Exposure Scenario Tool</td>
<td>OSHA</td>
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<td>EOSCA</td>
<td>European Oilfield Specialty Chemicals Association</td>
<td>PEL</td>
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<tr>
<td>EINECS</td>
<td>European Inventory of Existing Chemical Substances</td>
<td>PICCS</td>
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<tr>
<td>MAK</td>
<td>Germany Maximum Concentration Values</td>
<td>PRNT</td>
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<tr>
<td>GHS</td>
<td>Globally Harmonized System</td>
<td>RCRA</td>
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<td>&gt;=</td>
<td>Greater Than or Equal To</td>
<td>STEL</td>
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<tr>
<td>IC50</td>
<td>Inhibition Concentration 50%</td>
<td>SARA</td>
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<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
<td>TLV</td>
</tr>
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<td>IECSC</td>
<td>Inventory of Existing Chemical Substances in China</td>
<td>TWA</td>
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<td>ENCS</td>
<td>Japan, Inventory of Existing and New Chemical Substances</td>
<td>TSCA</td>
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<td>KECI</td>
<td>Korea, Existing Chemical Inventory</td>
<td>UVCB</td>
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</tr>
<tr>
<td>LC50</td>
<td>Lethal Concentration 50%</td>
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