SAFETY DATA SHEET

1. Identification

Product identifier: DRILL-TERGE™

Other means of identification: None.

Recommended use: Not available.

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name: CETCO, an MTI Company

Address: 2870 Forbs Avenue

Hoffman Estates, IL 60192

United States

Telephone: General Information 800 527-9948

Website: http://www.cetco.com/

E-mail: safetydata@mineralstech.com

Emergency phone number: Emergency 1.866.519.4752/1 760 476 3962

Supplier: Not available.

2. Hazard identification

Physical hazards: Not classified.

Health hazards:

- Acute toxicity, oral: Category 4
- Skin corrosion/irritation: Category 2
- Serious eye damage/eye irritation: Category 1

Environmental hazards:

- Hazardous to the aquatic environment, acute hazard: Category 3

Label elements

Signal word: Danger

Hazard statement: Harmful if swallowed. Causes skin irritation. Causes serious eye damage. Harmful to aquatic life.

Precautionary statement

Prevention: Keep out of reach of children. Read label before use. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear eye protection/face protection. Wear protective gloves.

Response: If medical advice is needed, have product container or label at hand. IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. 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/doctor. Specific treatment (see on this label). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

Storage: Store away from incompatible materials.

Disposal: Dispose of waste and residues in accordance with local authority requirements. Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards: None known.

3. Composition/information on ingredients

Mixtures

Material name: DRILL-TERGE™

4638  Version #: 12  Revision date: 22-October-2018  Issue date: 13-August-2018
### 4. First-aid measures

#### Inhalation
If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician if symptoms develop or persist.

#### Skin contact
Remove contaminated clothing. Immediately flush skin with plenty of water. If skin irritation occurs: Get medical advice/attention. For minor skin contact, avoid spreading material on unaffected skin. Wash contaminated clothing before reuse. Wash clothing separately before reuse.

#### Eye contact
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

#### Ingestion
Rinse mouth thoroughly. If vomiting occurs, keep head low so that stomach content doesn’t get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical advice/attention if you feel unwell.

#### Most important symptoms/effects, acute and delayed
Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

#### Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

#### General information
In case of shortness of breath, give oxygen. IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Keep victim under observation. Keep victim warm.

### 5. Fire-fighting measures

#### Suitable extinguishing media
Dry chemical, CO2, water spray or regular foam. Use methods for the surrounding fire.

#### Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

#### Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

#### Special protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### Fire fighting equipment/instructions
Move containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out.

#### Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials.

#### General fire hazards
No unusual fire or explosion hazards noted. This material will not burn.

### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
**Methods and materials for containment and cleaning up**

Stop leak if you can do so without risk. Flush with plenty of water. Prevent product from entering drains.

Large Spills: Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage**

**Precautions for safe handling**

Do not get this material in contact with eyes. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Do not use in areas without adequate ventilation. Wear appropriate personal protective equipment. Wash thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. Keep away from heat and flame.

**Conditions for safe storage, including any incompatibilities**

Store in tightly closed container. Keep out of the reach of children. Store away from incompatible materials (see Section 10 of the SDS). Keep in a cool, well-ventilated place.

**8. Exposure controls/personal protection**

**Occupational exposure limits**

**US. ACGIH Threshold Limit Values**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHANOLAMINE (CAS 111-42-2)</td>
<td>TWA</td>
<td>1 mg/m3</td>
<td>Inhalable fraction and vapor.</td>
</tr>
</tbody>
</table>

**Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHANOLAMINE (CAS 111-42-2)</td>
<td>TWA</td>
<td>2 mg/m3</td>
</tr>
</tbody>
</table>

**Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)**

<table>
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**Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)**

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**Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)**

<table>
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</tr>
</tbody>
</table>

**Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)**

<table>
<thead>
<tr>
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<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHANOLAMINE (CAS 111-42-2)</td>
<td>TWA</td>
<td>13 mg/m3</td>
</tr>
</tbody>
</table>

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Exposure guidelines**

**Canada - Alberta OELs: Skin designation**

DIETHANOLAMINE (CAS 111-42-2) Can be absorbed through the skin.

**Canada - British Columbia OELs: Skin designation**

DIETHANOLAMINE (CAS 111-42-2) Can be absorbed through the skin.
Canada - Manitoba OELs: Skin designation
DIETHANOLAMINE (CAS 111-42-2) Can be absorbed through the skin.

Canada - Ontario OELs: Skin designation
DIETHANOLAMINE (CAS 111-42-2) Can be absorbed through the skin.

Canada - Quebec OELs: Skin designation
DIETHANOLAMINE (CAS 111-42-2) Can be absorbed through the skin.

Canada - Saskatchewan OELs: Skin designation
DIETHANOLAMINE (CAS 111-42-2) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation
DIETHANOLAMINE (CAS 111-42-2) Can be absorbed through the skin.

Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure adequate ventilation, especially in confined areas. Provide eyewash station and safety shower. Good general ventilation should be sufficient to control airborne levels. Local exhaust is suggested for use, where possible, in enclosed or confined spaces.

Individual protection measures, such as personal protective equipment
Eye/face protection
Wear eye/face protection. Wear safety glasses with side shields (or goggles) and a face shield. Applicable for industrial settings only.

Skin protection
Hand protection
Wear appropriate chemical resistant gloves. Applicable for industrial settings only.

Other
Wear appropriate chemical resistant clothing. Wear appropriate chemical resistant gloves. Chemical resistant gloves. Applicable for industrial settings only. The use of natural rubber gloves is recommended.

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment. Applicable for industrial settings only. Not normally needed. If ventilation is not sufficient to effectively prevent buildup of aerosols or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations
Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Use good industrial hygiene practices in handling this material. Eye wash fountain is recommended.

9. Physical and chemical properties
Appearance
Clear.
Physical state
Liquid.
Form
Liquid.
Color
Blue.

Odor
Slight.
Odor threshold
Not available.
pH
8.7 - 9.3
Melting point/freezing point
Not available.
Initial boiling point and boiling range
212 °F (100 °C)
Flash point
Not available.
Evaporation rate
Not available.
Flammability (solid, gas)
Not applicable.

Upper/lower flammability or explosive limits
Flammability limit - lower (%)
Not available.
Flammability limit - upper (%)
Not available.
Explosive limit - lower (%)
Not available.
Explosive limit - upper (%)
Not available.
Vapor pressure
0.00001 hPa estimated
Vapor density Not available.
Relative density Not available.
Solubility(ies)
  Solubility (water) Not available.
Partition coefficient (n-octanol/water) Not available.
Auto-ignition temperature Not available.
Decomposition temperature Not available.
Viscosity Not available.
Other information
  Density 1.10 g/cm³ estimated
  Explosive properties Not explosive.
  Oxidizing properties Not oxidizing.
  Percent volatile 90 % estimated
  Specific gravity 1.02

10. Stability and reactivity
Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability Stable at normal conditions.
Possibility of hazardous reactions Will not occur.
Conditions to avoid Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials. Avoid temperatures above 190°F (87.8°C).
Incompatible materials strong acids and strong bases
Hazardous decomposition products Upon decomposition, this product may yield oxides of nitrogen and ammonia, carbon dioxide, carbon monoxide and other low molecular weight hydrocarbons.

11. Toxicological information
Information on likely routes of exposure
  Inhalation May cause damage to organs by inhalation. Prolonged inhalation may be harmful.
  Skin contact Causes skin irritation.
  Eye contact Causes serious eye damage.
  Ingestion Harmful if swallowed. May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.
Symptoms related to the physical, chemical and toxicological characteristics 
Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. Exposure may cause temporary irritation, redness, or discomfort.
Information on toxicological effects
  Acute toxicity Harmful if swallowed.
  Skin corrosion/irritation Prolonged skin contact may cause temporary irritation. Causes skin irritation.
  Serious eye damage/eye irritation Causes serious eye damage.
Respiratory or skin sensitization
  Respiratory sensitization Not a respiratory sensitizer.
  Skin sensitization This product is not expected to cause skin sensitization.
Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity Risk of cancer cannot be excluded with prolonged exposure.

ACGIH Carcinogens
DIETHANOLAMINE (CAS 111-42-2) A3 Confirmed animal carcinogen with unknown relevance to humans.

Canada - Manitoba OELs: carcinogenicity
DIETHANOLAMINE (CAS 111-42-2) Confirmed animal carcinogen with unknown relevance to humans.
IARC Monographs. Overall Evaluation of Carcinogenicity

DIETHANOLAMINE (CAS 111-42-2) 2B Possibly carcinogenic to humans.

Reproductive toxicity
This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure
Not classified.

Specific target organ toxicity - repeated exposure
Not classified.

Aspiration hazard
Not an aspiration hazard.

Chronic effects
Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity
Harmful to aquatic life. This product is not expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHANOLAMINE (CAS 111-42-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Algae</td>
<td>IC50 Algae</td>
<td>7.8 mg/L, 72 Hours</td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50 Daphnia</td>
<td>55 mg/L, 48 Hours</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50 Fathead minnow</td>
<td>100 mg/l, 96 hours</td>
</tr>
<tr>
<td></td>
<td>Fish</td>
<td>4710 mg/L, 96 Hours</td>
</tr>
</tbody>
</table>

Persistence and degradability
No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

DIETHANOLAMINE -1.43

Mobility in soil
No data available.

Other adverse effects
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions
Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations
Dispose in accordance with all applicable regulations.

Hazardous waste code
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging
Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not established.

15. Regulatory information

Canadian regulations
This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.
**Controlled Drugs and Substances Act**
Not regulated.

**Export Control List (CEPA 1999, Schedule 3)**
Not listed.

**Greenhouse Gases**
Not listed.

**Precursor Control Regulations**
Not regulated.

**International regulations**

<table>
<thead>
<tr>
<th>Convention</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stockholm Convention</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Rotterdam Convention</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Kyoto protocol</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Montreal Protocol</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Basel Convention</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

**International Inventories**

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>No</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>No</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Taiwan Chemical Substance Inventory (TCSI)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

*A “Yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

**16. Other information**

<table>
<thead>
<tr>
<th>Issue date</th>
<th>13-August-2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision date</td>
<td>22-October-2018</td>
</tr>
<tr>
<td>Version #</td>
<td>12</td>
</tr>
</tbody>
</table>

Further information
This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

References
- ACGIH
- EPA: AQUIRE database
- NLM: Hazardous Substances Data Base
- US. IARC Monographs on Occupational Exposures to Chemical Agents
Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The manufacturer expressly does not make any representations, warranties, or guarantees as to its accuracy, reliability or completeness nor assumes any liability, for its use. It is the user's responsibility to verify the suitability and completeness of such information for each particular use.

Third party materials: Insofar as materials not manufactured or supplied by this manufacturer are used in conjunction with, or instead of this product, it is the responsibility of the customer to obtain, from the manufacturer or supplier, all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of this product in conjunction with materials from another supplier. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. CETCO, an MTI Company cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Revision information

This document has undergone significant changes and should be reviewed in its entirety.