1. Product and Company Identification

Material Name: NE-100W
Revision Date: 12/21/2011
Version #: 3
Product Use: Non-emulsifier.
Manufacturer / Supplier: FRAC TECH SERVICES LLC
2500 HWY 62 West
Chickasha, OK 73018
US
General information: 1-405-222-2300

Emergency
24 Hour Emergency: INFOTRAC: 1-800-535-5053

2. Hazards Identification

Physical State: Liquid.
Appearance: Yellow liquid.
Emergency Overview: DANGER!
May be fatal or cause blindness if swallowed. Cannot be made nonpoisonous - vapor harmful. Harmful if absorbed through skin. Causes skin and eye irritation. Mist or vapor irritating to eyes and respiratory tract. Combustible liquid and vapor.

OSHA regulatory status: This product is hazardous according to OSHA 29 CFR 1910.1200.
Routes of exposure: Inhalation. Eyes. Skin. Ingestion.

Eyes: Causes eye irritation.
Skin: Harmful if absorbed through skin. Causes skin irritation.
Inhalation: Cannot be made nonpoisonous - vapor harmful. Causes respiratory tract irritation.
Ingestion: May be fatal or cause blindness if swallowed.

Potential environmental effects: Not expected to be harmful to aquatic organisms.

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>5 - 15</td>
</tr>
<tr>
<td>2-Butoxyethanol</td>
<td>111-76-2</td>
<td>1 - 10</td>
</tr>
<tr>
<td>2-Propanol</td>
<td>67-63-0</td>
<td>1 - 10</td>
</tr>
<tr>
<td>Dodecylbenzenesulfonic acid</td>
<td>27176-87-0</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

Composition comments: All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

First aid procedures

Eye Contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention. In case of irritation from airborne exposure, move to fresh air. Get medical attention if symptoms persist.

Skin Contact: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion: Call a physician or poison control center immediately. DO NOT induce vomiting. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than the hips to help prevent aspiration.
5. Fire Fighting Measures

**Combustible liquid and vapor. Use water with caution: Material will float and may ignite on the surface of water.**

**Extinguishing media**

- Unsuitable extinguishing media: Not available.

**Specific hazards arising from the chemical**

- Not available.

**Firefighting equipment / instructions**

- Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Specific Methods**

- Use water spray to cool unopened containers.

**Hazardous combustion products**

- Carbon oxides.

6. Accidental Release Measures

**Personal precautions**

- Wear appropriate personal protective equipment (See Section 8).

**Methods for cleaning up**

- Absorb spill with vermiculite or other inert material, then place in a container for chemical waste for proper disposal.

**Large Spills:** Flush area with water. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.

7. Handling and Storage

**Handling**

- Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.

**Storage**

- Keep away from heat, sparks, and flame. Keep container closed. Store away from incompatible materials (See Section 10).

8. Exposure Controls / Personal Protection

**Occupational exposure limits**

**US. ACGIH Threshold Limit Values**

<table>
<thead>
<tr>
<th>Components</th>
<th>TWA</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>2-Butoxyethanol</td>
<td>20</td>
<td>Not available.</td>
</tr>
<tr>
<td>2-Propanol</td>
<td>400</td>
<td>980</td>
</tr>
<tr>
<td>Dodecylbenzenesulfonic acid</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**US. OSHA Table Z-1 Limits for Air Contaminates (29 CFR 1910.1000)**

<table>
<thead>
<tr>
<th>Components</th>
<th>PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>200</td>
</tr>
<tr>
<td>2-Butoxyethanol</td>
<td>50</td>
</tr>
</tbody>
</table>

Notes to physician: Symptoms of poisoning may not appear for several hours. Keep under medical supervision for at least 48 hours.
### Components

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

<table>
<thead>
<tr>
<th>Components</th>
<th>TWA</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ppm</td>
<td>mg/m3</td>
</tr>
<tr>
<td>Methanol</td>
<td>250</td>
<td>328</td>
</tr>
<tr>
<td>2-Propanol</td>
<td>200</td>
<td>492</td>
</tr>
<tr>
<td>Dodecylbenzenesulfonic acid</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Components</th>
<th>TWA</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ppm</td>
<td>mg/m3</td>
</tr>
<tr>
<td>Methanol</td>
<td>200</td>
<td>Not available.</td>
</tr>
<tr>
<td>2-Butoxyethanol</td>
<td>20</td>
<td>Not available.</td>
</tr>
<tr>
<td>2-Propanol</td>
<td>200</td>
<td>Not available.</td>
</tr>
<tr>
<td>Dodecylbenzenesulfonic acid</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

#### Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents)

<table>
<thead>
<tr>
<th>Components</th>
<th>TWA</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ppm</td>
<td>mg/m3</td>
</tr>
<tr>
<td>Methanol</td>
<td>200</td>
<td>262</td>
</tr>
<tr>
<td>2-Butoxyethanol</td>
<td>200</td>
<td>Not available.</td>
</tr>
<tr>
<td>2-Propanol</td>
<td>200</td>
<td>Not available.</td>
</tr>
<tr>
<td>Dodecylbenzenesulfonic acid</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

#### Canada. Quebec OELS. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

<table>
<thead>
<tr>
<th>Components</th>
<th>TWA</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ppm</td>
<td>mg/m3</td>
</tr>
<tr>
<td>Methanol</td>
<td>200</td>
<td>262</td>
</tr>
<tr>
<td>2-Butoxyethanol</td>
<td>20</td>
<td>97</td>
</tr>
<tr>
<td>2-Propanol</td>
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<td>983</td>
</tr>
<tr>
<td>Dodecylbenzenesulfonic acid</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
9. Physical and Chemical Properties

**Appearance:** Yellow liquid.

**Color:** Yellow.

**Odor:** Mild Citrus

**Odor threshold:** Not available.

**Physical State:** Liquid.

**Form:** Liquid.

**pH:** 3.435 1%v/v

**Melting point:** Not available.

**Freezing point:** 12 °F (-11.1 °C)

**Boiling point:** 185 °F (85 °C)

**Flash point:** 108 °F (42.2 °C) Closed Cup

**Evaporation rate:** Not available.

**Flammability limits in air, upper, % by volume:** Not available.

**Flammability limits in air, lower, % by volume:** Not available.

**Vapor pressure:** Not available.

---

Mexico. Occupational Exposure Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>TWA ppm</th>
<th>TWA mg/m³</th>
<th>STEL ppm</th>
<th>STEL mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>200</td>
<td>260</td>
<td>250</td>
<td>310</td>
</tr>
<tr>
<td>2-Butoxyethanol</td>
<td>26</td>
<td>120</td>
<td>75</td>
<td>360</td>
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<td>2-Propanol</td>
<td>400</td>
<td>980</td>
<td>50</td>
<td>1225</td>
</tr>
<tr>
<td>Dodecylbenzenesulfonic acid</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
</tbody>
</table>

**Engineering controls**

Ensure adequate ventilation, especially in confined areas.

**Personal protective equipment**

**Eye / face protection**

Wear safety glasses with side shields (or goggles).

**Skin protection**

Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure. Contact glove manufacturer for specific information.

**Respiratory protection**

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister.

**General hygiene consideration**

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.
Vapor density: Not available.
Specific Gravity: 0.975 (25°C)
Solubility (water): Soluble.
Partition coefficient (n-octanol/water): Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Bulk Density: 8.19 lb/gal
VOC: Not available.
Viscosity: Not available.
Percent volatile: Not available.

10. Chemical Stability  Reactivity Information
Chemical Stability: Material is stable under normal conditions.
Conditions to avoid: Keep away from heat, sparks, and flame.
Incompatible material: Strong oxidizing agents.
Hazardous decomposition products: No hazardous decomposition products are known.
Possibility of hazardous reaction: Hazardous polymerization does not occur.

11. Toxicology Information
Toxicological Data

Components | Test Results
--- | ---
Methanol | Acute Dermal LD50 Rabbit: 15800 mg/kg
| Acute Inhalation LC50 Rat: 87.5 mg/l 6 Hours
| Acute Oral LD50 Rat: 5628 mg/kg
2-Butoxyethanol | Not available.
2-Propanol | Not available.
Dodecylbenzenesulfonic acid | Not available.

Sensitization: This material has a low potential to cause allergic skin reactions; however, cases of human skin sensitization have been reported.

Carcinogenicity
Methanol | Not available.
2-Butoxyethanol | ACGIH:A3 Confirmed animal carcinogen with unknown relevance to humans.
| IARC: 3 Not classifiable as to carcinogenicity to humans.
2-Propanol | ACGIH:3A4 Not classifiable as a human carcinogen.
Dodecylbenzenesulfonic acid | Not available.

Epidemology: Not available.
12. Ecological Information

Ecotoxicological data

Components | Test Results
--- | ---
Methanol | EC50 Water flea (Daphnia magna): > 10000 mg/l 48 hours
| LC50 Fathead minnow (Pimephales promelas): > 100 mg/l 96 hours
2-Butoxyethanol | Not available.
2-Propanol | Not available.
Dodecylbenzenesulfonic acid | Not available.

Ecotoxicity
Not expected to be harmful to aquatic organisms.

Persistence and degradability | Not available.
Bioaccumulation / Accumulation | Not available.
Mobility in environmental media | Not available.
Partition coefficient (n-octanol/water) | Not available.

13. Disposal Considerations

Waste codes
D001: Waste Flammable material with a flash point <140 °F

Disposal instructions
Dispose of contents/container in accordance with local/regional/national/international regulations. When this product as supplied is to be discarded as waste, it may meet the definition of a RCRA waste under 40 CFR 261.

Contaminated packaging
Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

DOT

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1993</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name</td>
<td>Combustible liquid, n.o.s. (Methanol 15%)</td>
</tr>
<tr>
<td>Hazard class</td>
<td>3</td>
</tr>
<tr>
<td>Packing Group</td>
<td>III</td>
</tr>
<tr>
<td>Labels required</td>
<td>3</td>
</tr>
<tr>
<td>DOT reportable quantity</td>
<td>100</td>
</tr>
</tbody>
</table>

Additional information

<table>
<thead>
<tr>
<th>Special provisions</th>
<th>B1, B52, IB3, T4, TP1, TP29</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaging exceptions</td>
<td>150</td>
</tr>
<tr>
<td>Packaging non bulk</td>
<td>203</td>
</tr>
<tr>
<td>Packaging bulk</td>
<td>242</td>
</tr>
<tr>
<td>ERG number</td>
<td>128</td>
</tr>
</tbody>
</table>
15. Regulatory Information

US federal regulation
This product is hazardous according to OSHA 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

CERCLA (Superfund) Reportable Quantity:
Methanol: 5000lbs
2-Propanol: 100lbs
Dodecylbenzene sulfonic acid: 1000lbs

Superfund amendments and Reauthorization Act of 1986 (SARA)

<table>
<thead>
<tr>
<th>Hazard Categories</th>
<th>Immediate Hazard:</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Delayed Hazard:</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Fire Hazard:</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Pressure Hazard:</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Reactivity Hazard:</td>
<td>No</td>
</tr>
</tbody>
</table>


US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration
2-Butoxyethanol (CAS 111-76-2) 1.0 % N230
2-Propanol (CAS 67-63-0) 1.0 %
Methanol (CAS 67-56-1) 1.0 %

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance
2-Butoxyethanol (CAS 111-76-2) N230 Listed.
2-Propanol (CAS 67-63-0) Listed.
Methanol (CAS 67-56-1) Listed.

Section 302 extremely hazardous substance (40 CRF 355, Appendix A): No
Section 311/312 (40 CFR 370): No

Drug Enforcement Administration (DEA) (21 CFR 1308.11-15): Not controlled

Inventory Status

<table>
<thead>
<tr>
<th>Country</th>
<th>Inventory Name</th>
<th>On Inventory *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>AICS</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>DSL</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>NDSL</td>
<td>No</td>
</tr>
</tbody>
</table>
WHMIS Information

WHMIS status Controlled
WHMIS classification B3 - Flammable/Combustible
D1B - Immediate/Serious-TOXIC
D2A - Other Toxic Effects-VERY TOXIC
D2B - Other Toxic Effects-TOXIC

State Regulation

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Hazardous Substances (Director's): Listed substance
2-Butoxyethanol (CAS 111-76-2) Listed.
2-Propanol (CAS 67-63-0) Listed.
Dodecylbenzenesulfonic acid (CAS 27176-87-0) Listed.
Methanol (CAS 67-56-1) Listed.

US - Massachusetts RTK - Substance: Listed substance
2-Butoxyethanol (CAS 111-76-2) Listed.
2-Propanol (CAS 67-63-0) Listed.
Dodecylbenzenesulfonic acid (CAS 27176-87-0) Listed.
Methanol (CAS 67-56-1) Listed.

US - New Jersey Community RTK (EHS Survey): Reportable threshold
2-Butoxyethanol (CAS 111-76-2) 500 LBS
2-Propanol (CAS 67-63-0) 500 LBS
Methanol (CAS 67-56-1) 500 LBS

US - New Jersey RTK - Substances: Listed substance
2-Butoxyethanol (CAS 111-76-2) Listed.
2-Propanol (CAS 67-63-0) Listed.
Dodecylbenzenesulfonic acid (CAS 27176-87-0) Listed.
Methanol (CAS 67-56-1) Listed.

US - Pennsylvania RTK - Hazardous Substances: Listed substance
2-Butoxyethanol (CAS 111-76-2) Listed.
2-Propanol (CAS 67-63-0) Listed.
Dodecylbenzenesulfonic acid (CAS 27176-87-0) Listed.
Methanol (CAS 67-56-1) Listed.

16. Other Information

Further Information

HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings

Health: 2*
Flammability: 2
Physical Hazard: 0

A HMIS® rating including an * indicates a chronic hazard.

NFPA ratings

Health: 2
Flammability: 2
Instability: 0

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

Seller warrants that the goods described herein shall conform to the seller's published specifications for such good. The goods described herein and the information relating to them is intended for use solely by buyers that have the necessary industrial skill, competence and knowledge to use these goods for their intended purposes. Buyers should undertake sufficient examination, verification and testing prior to use of the goods to determine the suitability and utility of the goods for Buyer's particular purposes. Buyer acknowledges that the conditions of use and uses of the good(s) are beyond the control of Seller. SELLER DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSES WHATSOEVER WITH RESPECT TO THE GOODS BEING SOLD HEREUNDER. BUYER ACKNOWLEDGES THAT THE GOODS ARE BEING SOLD “AS IS.” BUYER FURTHER ACKNOWLEDGES THAT THERE HAVE BEEN NO REPRESENTATIONS CONCERNING THE GOODS BEING SOLD HEREUNDER OTHER THAN WHAT ARE EXPRESSLY SET FORTH AND CONTAINED HEREIN.

Issue Date

12/21/2011