SECTION 1: Identification

1.1. Identification
Product form : Substance
Trade name : HANDY FLO 420
Product code : A00001154

1.2. Recommended use and restrictions on use
No additional information available

1.3. Supplier
Lucas-Milhaupt, Inc.
5656 South Pennsylvania Ave.
Cudahy, WI 53110 - USA
T (414)-769-6000
LM_SDSinfo@lucasmilhaupt.com  -  www.Lucasmilhaupt.com

1.4. Emergency telephone number
Emergency number : CHEMTREC within the USA and Canada: 1-800-424-9300
                      CHEMTREC outside the USA and Canada +1 701-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture
GHS US classification
Specific target organ toxicity — Repeated exposure, Category 2
H373  May cause damage to organs through prolonged or repeated exposure.
Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements
GHS US labelling
Hazard pictograms (GHS US) :

Signal word (GHS US) : Warning
Hazard statements (GHS US) : H373 - May cause damage to organs through prolonged or repeated exposure.
Precautionary statements (GHS US) :
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P314 - Get medical advice/attention if you feel unwell.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards which do not result in classification
No additional information available

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances
Name : HANDY FLO 420

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier (CAS-No.)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>107-21-1</td>
<td>43 - 50</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures
Not applicable
SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general: Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact: Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion: Rinse mouth. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact: Irritation.
Symptoms/effects after eye contact: Serious damage to eyes.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media


5.2. Specific hazards arising from the chemical

Fire hazard: Highly flammable liquid and vapour.
Reactivity: Highly flammable liquid and vapour.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures: Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin and eyes.
Hygiene measures: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Ground/bond container and receiving equipment.
Storage conditions: Store in a well-ventilated place. Keep cool. Keep container tightly closed.
SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Ethylene glycol (107-21-1)</th>
<th>ACGIH</th>
<th>ACGIH TWA (ppm)</th>
<th>25 ppm (vapor fraction)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>ACGIH</td>
<td>ACGIH STEL (mg/m³)</td>
<td>10 mg/m³ (inhalable particulate matter, aerosol only)</td>
</tr>
<tr>
<td>ACGIH</td>
<td>ACGIH</td>
<td>ACGIH STEL (ppm)</td>
<td>50 ppm (vapor fraction)</td>
</tr>
</tbody>
</table>

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

**Hand protection:**
Protective gloves

**Eye protection:**
Safety glasses

**Skin and body protection:**
Wear suitable protective clothing

**Respiratory protection:**
In case of insufficient ventilation, wear suitable respiratory equipment

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information

No additional information available
## SECTION 10: Stability and reactivity

### 10.1. Reactivity
Highly flammable liquid and vapour.

### 10.2. Chemical stability
Stable under normal conditions.

### 10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid
Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials
No additional information available

### 10.6. Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Acute toxicity (oral)</th>
<th>Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (dermal)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**Ethylene glycol (107-21-1)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>4700 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td>10600 mg/kg</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>4700 mg/kg bodyweight</td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>10600 mg/kg bodyweight</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>May cause damage to organs through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Symptoms/effects after skin contact</td>
<td>Irritation.</td>
</tr>
<tr>
<td>Symptoms/effects after eye contact</td>
<td>Serious damage to eyes.</td>
</tr>
</tbody>
</table>

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

**Ethylene glycol (107-21-1)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>41000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>46300 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>14 - 18 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])</td>
</tr>
</tbody>
</table>

### 12.2. Persistence and degradability
No additional information available

### 12.3. Bioaccumulative potential

05/20/2019 EN (English)
Ethylene glycol (107-21-1)

Log Pow: -1.93

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects

Ethylene glycol (107-21-1)
1990 Hazardous Air Pollutant (Clean Air Act): Yes

SECTION 13: Disposal considerations

13.1. Disposal methods
Waste treatment methods: Dispose of contents/container in accordance with licensed collector’s sorting instructions.
Additional information: Flammable vapours may accumulate in the container.

SECTION 14: Transport information

Department of Transportation (DOT)
In accordance with DOT
Not applicable

Transportation of Dangerous Goods
Not applicable

Transport by sea
Not applicable

Air transport
Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Ethylene glycol (107-21-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313
CERCLA RQ: 5000 lb

15.2. International regulations

Ethylene glycol (107-21-1)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

WARNING: This product can expose you to Ethyl alcohol, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

<table>
<thead>
<tr>
<th>Component</th>
<th>Carcinogenicity</th>
<th>Developmental toxicity</th>
<th>Reproductive toxicity male</th>
<th>Reproductive toxicity female</th>
<th>No significant risk level (NSRL)</th>
<th>Maximum allowable dose level (MADL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol (107-21-1)</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>8700 µg/day oral; ingested</td>
</tr>
<tr>
<td>Ethyl alcohol (64-17-5)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

05/20/2019 EN (English) 5/6
Component | Carcinogenicity | Developmental toxicity | Reproductive toxicity male | Reproductive toxicity female | No significant risk level (NSRL) | Maximum allowable dose level (MADL)
--- | --- | --- | --- | --- | --- | ---
Methyl alcohol (67-56-1) | | X | | | | 47000 µg/day inhalation
Phenolphthalein (77-09-8) | X | | | | | 
Benzene (71-43-2) | X | X | | | 6.4 µg/day (oral) | 24 µg/day oral

Component | State or local regulations
--- | ---
Ethylene glycol (107-21-1) | U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Full text of H-statements:

| H373 | May cause damage to organs through prolonged or repeated exposure.

SDS US (GHS HazCom 2012)

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

Lucas-Milhaupt, Inc.