SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade name</td>
<td>POLY-SOLV® DM-HP</td>
</tr>
<tr>
<td>Chemical name</td>
<td>DIETHYLENE GLYCOL MONOMETHYL ETHER</td>
</tr>
<tr>
<td>CAS No</td>
<td>111-77-3</td>
</tr>
<tr>
<td>Formula</td>
<td>C5H12O3</td>
</tr>
</tbody>
</table>

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture: Solvent

1.3. Details of the supplier of the safety data sheet

Monument Chemical
2450 Olin Road
Brandenburg, KY 40108 - USA
T (270)422-6860
ds@monumentchemical.com - www.monumentchemical.com

1.4. Emergency telephone number

Emergency number: 24 HR CHEMTREC: 1-800-424-9300; 24 HR Emergency Assistance: 1-270-422-6860

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)
- Flam. Liq. 4: H227
- Repr. 2: H361

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US): GH508

Signal word (GHS-US): Warning

Hazard statements (GHS-US):
- H227 - Combustible liquid
- H361 - Suspected of damaging fertility or the unborn child

Precautionary statements (GHS-US):
- P201 - Obtain special instructions before use
- P202 - Do not handle until all safety precautions have been read and understood
- P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking
- P280 - Wear eye protection, protective clothing, protective gloves
- P308+P313 - If exposed or concerned: Get medical advice/attention
- P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO2), dry extinguishing powder, Water spray to extinguish
- P403+P235 - Store in a well-ventilated place. Keep cool
- P405 - Store locked up
- 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

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable
SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHYLENE GLYCOL MONOMETHYL ETHER (Main constituent)</td>
<td>(CAS No) 111-77-3</td>
<td>95 - 100</td>
<td>Flam. Liq. 4, H227 Repr. 2, H361</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation: Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media


Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Combustible liquid.

Explosion hazard: May form flammable/explosive vapor-air mixture.

5.3. Advice for firefighters

Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

6.1.1. For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

Emergency procedures: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.
**SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

Additional hazards when processed: Handle empty containers with care because residual vapors are flammable. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Technical measures:
Proper grounding procedures to avoid static electricity should be followed.

#### Storage conditions:
Keep only in the original container in a cool, well ventilated place away from: Ignition sources, Incompatible materials. Keep container closed when not in use. Keep in fireproof place.

#### Incompatible products:
Strong bases. Strong acids.

#### Incompatible materials:
Sources of ignition. Direct sunlight. Heat sources.

### 7.3. Specific end use(s)
No additional information available

**SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

<table>
<thead>
<tr>
<th>DIETHYLENE GLYCOL MONOMETHYL ETHER (111-77-3)</th>
<th>ACGIH</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OSHA</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### 8.2. Exposure controls

#### Personal protective equipment
Avoid all unnecessary exposure.

- **Hand protection**: Wear protective gloves.
- **Eye protection**: Chemical goggles or safety glasses.
- **Respiratory protection**: Wear appropriate mask.
- **Other information**: Do not eat, drink or smoke during use.

**SECTION 9: Physical and chemical properties**

### 9.1. Information on basic physical and chemical properties

- **Physical state**: Liquid
- **Appearance**: Clear, colorless liquid.
- **Color**: Colorless
- **Odor**: Characteristic
- **Odor threshold**: No data available
- **pH**: No data available
- **Melting point**: -84 °C
- **Freezing point**: -87 °C
- **Boiling point**: 194 °C
- **Flash point**: 91 - 93 °C (Open cup)
- **Relative evaporation rate (butyl acetate=1)**: < 0.02
- **Flammability (solid, gas)**: No data available
- **Explosion limits**: 1.5 - 9.5 vol %
- **Explosive properties**: No data available
- **Oxidizing properties**: No data available
- **Vapor pressure**: 0.18 mm Hg (@ 25 Deg. C)
- **Relative density**: 1.02
- **Relative vapor density at 20 °C**: 4.14
- **Specific gravity / density**: 8.5 lb/gal
- **Molecular mass**: 120.1 g/mol
- **Solubility**: Soluble in water.
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>-0.682</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>250 °C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</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>
</tbody>
</table>

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Combustible liquid. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions
Not established.

10.4. Conditions to avoid

10.5. Incompatible materials
Strong acids. Strong bases.

10.6. Hazardous decomposition products

SECTION 11: Toxicological information

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</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>Suspected of damaging fertility or the unborn child.</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
<tr>
<td>Potential Adverse human health effects and symptoms</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
</tbody>
</table>

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>Species</th>
<th>EC50/LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHYLENE GLYCOL MONOMETHYL ETHER (111-77-3)</td>
<td></td>
</tr>
<tr>
<td>EC50 fish 1</td>
<td>7500 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>&gt; 500 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>7500 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)</td>
</tr>
</tbody>
</table>
12.2. Persistence and degradability

**DIETHYLENE GLYCOL MONOMETHYL ETHER (111-77-3)**

| Persistence and degradability | Not established. |

12.3. Bioaccumulative potential

**DIETHYLENE GLYCOL MONOMETHYL ETHER (111-77-3)**

| Log Pow | -0.682 |
| Bioaccumulative potential | Not established. |

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Additional information: Handle empty containers with care because residual vapors are flammable.

Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transpot document description: NA1993 Combustible liquid, n.o.s. (Glycol ethers), 3, III

UN-No.(DOT): NA1993

Proper Shipping Name (DOT): Combustible liquid, n.o.s. (Glycol ethers)

Transport hazard class(es) (DOT): 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Packing group (DOT): III - Minor Danger

DOT Packaging Non Bulk (49 CFR 173.xxx): 203

DOT Packaging Bulk (49 CFR 173.xxx): 241

DOT Symbols: D - Proper shipping name for domestic use only, or to and from Canada, G - Identifies PSN requiring a technical name

DOT Special Provisions (49 CFR 172.102): IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

T1 - 1.5 178.274(d)(2) Normal............. 178.275(d)(2)

T4 - 2.65 178.274(d)(2) Normal............. 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx): 150

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27): 60 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75): 220 L

DOT Vessel Stowage Location: A - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel.

Additional information: Transportation Notes: Material is not regulated for ground transportation within the US if shipped in non-bulk packages.
ADR
No additional information available

Transport by sea
Not regulated for transport

Air transport
Not regulated for transport

SECTION 15: Regulatory information

15.1. US Federal regulations
DIETHYLENE GLYCOL MONOMETHYL ETHER (111-77-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations
CANADA
DIETHYLENE GLYCOL MONOMETHYL ETHER (111-77-3)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
DIETHYLENE GLYCOL MONOMETHYL ETHER (111-77-3)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Repr. 2
H361d
Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
Not classified

National regulations
DIETHYLENE GLYCOL MONOMETHYL ETHER (111-77-3)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Canadian IDL (Ingredient Disclosure List)
Listed on INSQ (Mexican national Inventory of Chemical Substances)
Listed on Turkish inventory of chemical

15.3. US State regulations
DIETHYLENE GLYCOL MONOMETHYL ETHER (111-77-3)
State or local regulations
U.S. - Massachusetts - Right To Know List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Revision date: 06/24/2015
Other information: None.

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H-Phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 4</td>
<td>Flammable liquids Category 4</td>
</tr>
<tr>
<td>Repr. 2</td>
<td>Reproductive toxicity Category 2</td>
</tr>
<tr>
<td>H227</td>
<td>Combustible liquid</td>
</tr>
<tr>
<td>H361</td>
<td>Suspected of damaging fertility or the unborn child</td>
</tr>
</tbody>
</table>

SDS US (GHS HazCom 2012)