Material Safety Data Sheet Attached
ROHM AND HAAS CANADA LP encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

**Product Name**
HEXYL CELLOSOLVE™ SOLVENT

**COMPANY IDENTIFICATION**
ROHM AND HAAS CANADA LP
A Subsidiary of The Dow Chemical Company
2 MANSE ROAD
WEST HILL ON M1E 3T9
CANADA

**Customer Information Number:**
1-800-258-2436
SDSQuestion@dow.com

**Fax:**
416-287-4495

**Prepared By:**
**Revision:**
05/09/2013
**Print Date:**
11/20/2013

**Fax:**
416-287-4495

**EMERGENCY TELEPHONE NUMBER**

24-Hour Emergency Contact: 989-636-4400
Local Emergency Contact: 989-636-4400

2. Hazards Identification

**Emergency Overview**

**Color:** Colorless
**Physical State:** Liquid.
**Odor:** Pungent
Hazards of product:


Potential Health Effects

Eye Contact: May cause severe eye irritation. May cause slight corneal injury.
Skin Contact: Brief contact may cause severe skin burns. Symptoms may include pain, severe local redness and tissue damage. Classified as corrosive to the skin according to DOT guidelines.
Skin Absorption: Prolonged or widespread skin contact may result in absorption of harmful amounts.
Inhalation: At room temperature, exposure to vapor is minimal due to low volatility; single exposure is not likely to be hazardous. For respiratory irritation and narcotic effects: No relevant data found.
Ingestion: Low toxicity if swallowed. Swallowing may result in burns of the mouth and throat.
Aspiration hazard: Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.
Reproductive Effects: For similar material(s): In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Amount W/W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol monoalkyl ether</td>
<td>112-25-4</td>
<td>&gt; 98.0 %</td>
</tr>
</tbody>
</table>

Amounts are presented as percentages by weight.

4. First-aid measures

Description of first aid measures

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Inhalation: Move person to fresh air; if effects occur, consult a physician.
Skin Contact: Immediate continued and thorough washing in flowing water for at least 30 minutes is imperative while removing contaminated clothing. Prompt medical consultation is essential. Wash clothing before reuse. Properly dispose of leather items such as shoes, belts, and watchbands. Safety shower should be located in immediate work area.
Eye Contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Eye wash fountain should be located in immediate work area.
Ingestion: Do not induce vomiting. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Do not give anything by mouth unless the person is fully conscious.
Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

If burn is present, treat as any thermal burn, after decontamination. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/esophageal control if lavage is done. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
Repeated excessive exposure may aggravate preexisting anemia.

5. Fire Fighting Measures

Suitable extinguishing media
Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Special hazards arising from the substance or mixture
Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.
Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.
Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.
Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.
See Section 9 for related Physical Properties

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Evacuate area. Ventilate area of leak or spill. Only trained and properly protected personnel must be involved in clean-up operations. Refer to Section 7, Handling, for additional precautionary measures. Keep unnecessary and unprotected personnel from entering the area. Keep upwind of spill. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. Material will float on water.
Methods and materials for containment and cleaning up: Small spills: Absorb with materials such as: Sand. Vermiculite. Collect in suitable and properly labeled containers. Large spills: Contain spilled material if possible. Pump into suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

7. Handling and Storage

Handling
**General Handling:** Do not swallow. Avoid contact with eyes. Do not get on skin or clothing. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**Other Precautions:** Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

**Storage**

- **Metal drums.** 24 Months
- **Shelf life:** Use within, Bulk 6 Months

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### 8. Exposure Controls / Personal Protection

**Exposure Limits**

<table>
<thead>
<tr>
<th>Component</th>
<th>List</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol monoethyl ether</td>
<td>Dow IHG</td>
<td>TWA</td>
<td>20 ppm SKIN</td>
</tr>
</tbody>
</table>

*Consult local authorities for recommended exposure limits.*

A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

**Personal Protection**

**Eye/Face Protection:** Use chemical goggles.

**Skin Protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

- **Hand protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Viton.

  **NOTICE:** The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Respiratory Protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge.

**Ingestion:** Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

**Engineering Controls**

**Ventilation:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.
9. Physical and Chemical Properties

**Appearance**
- Physical State: Liquid.
- Color: Colorless
- Odor: Pungent
- Odor Threshold: No test data available
- pH: No test data available
- Melting Point: Not applicable to liquids
- Freezing Point: -50 °C
- Boiling Point (760 mmHg): 208.5 °C
- Flash Point - Closed Cup: 91.5 °C
- Flash Point - Open Cup: 104 °C Cleveland Open Cup ASTM D92
- Evaporation Rate (Butyl Acetate = 1): <0.01
- Flammability (solid, gas): Not applicable to liquids
- Vapor Pressure: 0.075 mmHg @ 20 °C
- Vapor Density (air = 1): 5 @ 20 °C
- Specific Gravity (H2O = 1): 0.889 20 °C/20 °C
- Solubility in water (by weight): 9.460 g/l @ 20 °C
- Partition coefficient, n-octanol/water (log Pow): 1.97 Measured
- Autoignition Temperature: 225 °C
- Decomposition: No test data available
- Temperature: 4.5 mPa.s @ 25 °C
- Kinematic Viscosity: 5.1 mm2/s @ 25 °C
- Explosive properties: No explosive
- Oxidizing properties: No
- Liquid Density: 0.89 g/cm3 @ 20 °C
- Molecular Weight: 146.2 g/mol

10. Stability and Reactivity

**Reactivity**
No dangerous reaction known under conditions of normal use.

**Chemical stability**
Thermally stable at typical use temperatures.

**Possibility of hazardous reactions**
Polymerization will not occur.

**Conditions to Avoid:**
Do not distill to dryness. Product can oxidize at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

**Incompatible Materials:**
Avoid contact with: Strong acids. Strong oxidizers. Strong bases.

**Hazardous decomposition products**
Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aldehydes. Ketones. Organic acids.

11. Toxicological Information

**Acute Toxicity**
Ingestion
LD50, Rat  738 mg/kg
Dermal
LD50, Rabbit  757 mg/kg
Inhalation
The LC50 value is greater than the Maximum Attainable Concentration. No deaths occurred at this concentration. LC0, 6 h, Vapor, Rat > 0.787 mg/l
Eye damage/eye irritation
May cause severe eye irritation. May cause slight corneal injury.
Skin corrosion/irritation
Brief contact may cause severe skin burns. Symptoms may include pain, severe local redness and tissue damage. Classified as corrosive to the skin according to DOT guidelines.
Sensitization
Skin
No relevant data found.
Respiratory
No relevant data found.
Repeated Dose Toxicity
Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects. Repeated exposure did not produce systemic toxicity when applied to the skin of rabbits.
Chronic Toxicity and Carcinogenicity
No relevant data found.
Developmental Toxicity
Did not cause birth defects or any other fetal effects in laboratory animals.
Reproductive Toxicity
For similar material(s): In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.
Genetic Toxicology
In vitro genetic toxicity studies were negative.

12. Ecological Information

Toxicity
Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity
LC50, fathead minnow (Pimephales promelas), static, 96 h: 140 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, water flea Daphnia magna, static, 48 h, immobilization: 145 mg/l
Aquatic Plant Toxicity
ErC50, Scenedesmus subspicatus (new name: Desmodesmus subspicatus), static, Growth rate inhibition, 96 h: 147.128 mg/l
EbC50, Scenedesmus subspicatus (new name: Desmodesmus subspicatus), static, biomass growth inhibition, 96 h: 69.617 mg/l
Toxicity to Micro-organisms
EC50; activated sludge, static, 0.5 h: > 750 mg/l

Persistence and Degradability
Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

OECD Biodegradation Tests:

<table>
<thead>
<tr>
<th>Biodegradation</th>
<th>Exposure Time</th>
<th>Method</th>
<th>10 Day Window</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>96.8 %</td>
<td>20 d</td>
<td>OECD 301E Test</td>
</tr>
</tbody>
</table>

Biological oxygen demand (BOD):

<table>
<thead>
<tr>
<th>BOD 5</th>
<th>BOD 10</th>
<th>BOD 20</th>
<th>BOD 28</th>
</tr>
</thead>
<tbody>
<tr>
<td>72 %</td>
<td>93 %</td>
<td>100 %</td>
<td></td>
</tr>
</tbody>
</table>
Product Name: HEXYL CELLOSOLVE™ SOLVENT

Chemical Oxygen Demand: 1.89 mg/mg
Theoretical Oxygen Demand: 2.52 mg/mg

Bioaccumulative potential
Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient, n-octanol/water (log Pow): 1.97 Measured
Bioconcentration Factor (BCF): 5.8; Estimated.

Mobility in soil
Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient, soil organic carbon/water (Koc): 10 Estimated.
Henry’s Law Constant (H): 4.15E-08 atm*m3/mole; 25 °C Estimated.

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

14. Transport Information

TDG Small container
Proper Shipping Name: CORROSIVE LIQUID, TOXIC, NOS
Technical Name: ETHYLENE GLYCOL MONOHEXYL ETHER
Hazard Class: 8 (6.1) ID Number: UN2922 Packing Group: PG II

TDG Large container
Proper Shipping Name: CORROSIVE LIQUID, TOXIC, N.O.S.
Technical Name: ETHYLENE GLYCOL MONOHEXYL ETHER
Hazard Class: 8 (6.1) ID Number: UN2922 Packing Group: PG II

IMDG
Proper Shipping Name: CORROSIVE LIQUID, TOXIC, NOS
Technical Name: ETHYLENE GLYCOL MONOHEXYL ETHER
Hazard Class: 8 (6.1) ID Number: UN2922 Packing Group: PG II
EMS Number: F-A,S-B

ICAO/IATA
Proper Shipping Name: CORROSIVE LIQUID, TOXIC, NOS
Technical Name: ETHYLENE GLYCOL MONOHEXYL ETHER
Hazard Class: 8 (6.1) ID Number: UN2922 Packing Group: PG II
Cargo Packing Instruction: 855
Passenger Packing Instruction: 851
15. Regulatory Information

US. Toxic Substances Control Act
All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

CEPA - Domestic Substances List (DSL)
All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

Hazardous Products Act Information: CPR Compliance
This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Hazardous Products Act Information: WHMIS Classification

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1A</td>
<td>Poisonous Substance Defined by TDG Regulations</td>
</tr>
<tr>
<td>D1B</td>
<td>Material is Toxic with Short Exposure and Moderate Dose</td>
</tr>
<tr>
<td>E</td>
<td>Corrosive to Metal or Skin</td>
</tr>
<tr>
<td>D2B</td>
<td>Eye or Skin Irritant</td>
</tr>
</tbody>
</table>

16. Other Information

Product Literature
Additional information on this product may be obtained by calling your sales or customer service contact.

Recommended Uses and Restrictions
Industrial solvent for cleaner and coating formulations. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

Revision
Identification Number: 1118 / 1126 / Issue Date 05/09/2013 / Version: 5.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>Not available</td>
</tr>
<tr>
<td>W/W</td>
<td>Weight/Weight</td>
</tr>
<tr>
<td>OEL</td>
<td>Occupational Exposure Limit</td>
</tr>
<tr>
<td>STEL</td>
<td>Short Term Exposure Limit</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
<tr>
<td>ACGIH</td>
<td>American Conference of Governmental Industrial Hygienists, Inc.</td>
</tr>
<tr>
<td>DOW IHG</td>
<td>Dow Industrial Hygiene Guideline</td>
</tr>
<tr>
<td>WEEL</td>
<td>Workplace Environmental Exposure Level</td>
</tr>
<tr>
<td>HAZ DES</td>
<td>Hazard Designation</td>
</tr>
<tr>
<td>VOL/VOL</td>
<td>Volume/Volume</td>
</tr>
</tbody>
</table>

ROHM AND HAAS CANADA LP urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer’s/user’s responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer’s/user’s duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-
specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.