



# Safety Data Sheet

The Dow Chemical Company

**Product Name:** PROPYL CELLOSOLVE(TM) SOLVENT

**Revision Date:** 2010/08/18

**Print Date:** 11 Feb 2011

The Dow Chemical Company 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. Identification of the substance/preparation and of the company/undertaking

**Product Name**  
PROPYL CELLOSOLVE(TM) SOLVENT

**Use of the substance/preparation**  
Industrial solvent for cleaner and coating formulations.

### COMPANY IDENTIFICATION

The Dow Chemical Company  
2030 Willard H. Dow Center  
48674 Midland, MI  
USA

Customer Information Number: 800-258-2436  
SDSQuestion@dow.com  
For questions about this SDS, contact: SDSQuestion@dow.com

### EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** 989-636-4400  
**Local Emergency Contact:** 00 31 115 69 4982

## 2. Hazards Identification

Harmful in contact with skin.  
Irritating to eyes.

## 3. Composition/information on ingredients

| Component                     | Amount   | Classification:  | CAS #     | EC #      |
|-------------------------------|----------|------------------|-----------|-----------|
| 2-(Propyloxy)ethanol;<br>EGPE | > 99.0 % | Xn: R21; Xi: R36 | 2807-30-9 | 220-548-6 |

See Section 16 for full text of R-phrases.

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## 4. First-aid measures

**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.

**Skin Contact:** Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing. Seek medical attention if symptoms occur or irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Safety shower should be located in immediate work area.

**Inhalation:** Move person to fresh air; if effects occur, consult a physician.

**Ingestion:** If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

**Notes to Physician:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

**Medical Conditions Aggravated by Exposure:** Excessive exposure may aggravate preexisting liver and kidney disease. Repeated excessive exposure may aggravate preexisting blood disease (anemia).

**Emergency Personnel Protection:** 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.

## 5. Fire Fighting Measures

**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.

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. 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. Eliminate ignition sources. 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.

**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. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur.

**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.

## 6. Accidental Release Measures

**Steps to be Taken if Material is Released or Spilled:** Small spills: Absorb with materials such as: Non-combustible material. Clay. Zorb-all®. Wash the spill site with large quantities of water. Large spills: Contain spilled material if possible. Dike area to contain spill. Collect in suitable and properly

labeled containers. Pump with explosion-proof equipment. If available, use foam to smother or suppress. See Section 13, Disposal Considerations, for additional information.

**Personal Precautions:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond all containers and handling equipment. Vapor explosion hazard. Keep out of sewers. For large spills, warn public of downwind explosion hazard. Check area with combustible gas detector before reentering area. Ground and bond all containers and handling equipment. Refer to Section 7, Handling, for additional precautionary measures. 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.

## 7. Handling and Storage

### Handling

**General Handling:** No smoking, open flames or sources of ignition in handling and storage area. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Avoid breathing vapor. Use with adequate ventilation. Keep container closed. Electrically ground and bond all equipment. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. Keep away from heat, sparks and flame. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION. This product is a poor conductor of electricity and can become electrostatically charged, even in bonded or grounded equipment. If sufficient charge is accumulated, ignition of flammable mixtures can occur. Handling operations that can promote accumulation of static charges include but are not limited to mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations.

**Other Precautions:** Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. 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

Minimize sources of ignition, such as static build-up, heat, spark or flame. Keep container closed. Store in the following material(s): Carbon steel. Stainless steel. Do not store in: Aluminum. Copper. Galvanized iron. Galvanized steel.

## 8. Exposure Controls / Personal Protection

### Exposure Limits

| Component                  | List    | Type | Value       |
|----------------------------|---------|------|-------------|
| 2-(Propyloxy)ethanol; EGPE | Dow IHG | TWA  | 20 ppm SKIN |
|                            | Dow IHG | STEL | 60 ppm SKIN |

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. Chemical goggles should be consistent with EN 166 or equivalent. Eye wash fountain should be located in immediate work area.

**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. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

**Hand protection:** Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. 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"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. **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, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. Use the following CE approved air-purifying respirator: Organic vapor cartridge, type A (boiling point >65 °C)

**Ingestion:** Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

### Engineering Controls

**Ventilation:** Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

## 9. Physical and Chemical Properties

|  |   |
|--|---|
| <b>Physical State</b>                  | Liquid.   |
| <b>Color</b>                           | Colorless   |
| <b>Odor</b>                            | mild, sweet   |
| <b>Odor Threshold</b>                  | No test data available  |
| <b>Flash Point - Closed Cup</b>        | 57 °C <i>ASTM D93</i>   |
| <b>Flammability (solid, gas)</b>       | Not applicable to liquids   |
| <b>Flammable Limits In Air</b>         | <b>Lower:</b> 1.3 %(V) <i>Literature</i><br><b>Upper:</b> 15.8 %(V) <i>Literature</i> |
| <b>Autoignition Temperature</b>        | 235 °C <i>Literature</i>  |
| <b>Vapor Pressure</b>                  | 0.238 kPa @ 20 °C <i>Literature</i>   |
| <b>Boiling Point (760 mmHg)</b>        | 150 °C <i>Literature</i> .  |
| <b>Vapor Density (air = 1)</b>         | 3.6 <i>Literature</i>   |
| <b>Specific Gravity (H2O = 1)</b>      | 0.912 20 °C/20 °C <i>Literature</i>   |
| <b>Freezing Point</b>                  | -90 °C <i>Literature</i>  |
| <b>Melting Point</b>                   | No test data available  |
| <b>Solubility in water (by weight)</b> | 100 % @ 20 °C <i>Literature</i>   |
| <b>pH</b>                              | No test data available  |
| <b>Molecular Weight</b>                | 104 g/mol <i>Literature</i>   |

|   |   |
|---|---|
| <b>Decomposition Temperature</b>                        | No test data available                            |
| <b>Partition coefficient, n-octanol/water (log Pow)</b> | 0.08 <i>Estimated.</i>                            |
| <b>Evaporation Rate (Butyl Acetate = 1)</b>             | 0.2 <i>Literature</i>                             |
| <b>Dynamic Viscosity</b>                                | 2.7 mPa.s @ 20 °C <i>Literature</i>               |
| <b>Kinematic Viscosity</b>                              | 2.93 mm <sup>2</sup> /s @ 20 °C <i>Calculated</i> |

## 10. Stability and Reactivity

### Stability/Instability

Thermally stable at typical use temperatures.

**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 bases. Strong oxidizers.

### Hazardous Polymerization

Will not occur.

### Thermal Decomposition

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

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

LD50, Rat, male 3,089 mg/kg

#### Dermal

Prolonged or widespread skin contact may result in absorption of harmful amounts.

Strong solutions (50%). LD50, Rabbit > 1,000 mg/kg

No deaths occurred at this concentration.

LD50, Guinea pig 2,043 mg/kg

#### Inhalation

Prolonged excessive exposure may cause adverse effects. Excessive exposure may cause irritation to upper respiratory tract (nose and throat). Observations in animals include: Red-coloured urine.

LC50, 6 h, Vapor, Rat, male > 2,132 ppm

#### Eye damage/eye irritation

May cause severe eye irritation. May cause moderate corneal injury.

#### Skin corrosion/irritation

Prolonged contact may cause skin irritation with local redness.

#### Sensitization

##### Skin

Did not cause allergic skin reactions when tested in guinea pigs.

#### Repeated Dose Toxicity

In animals, effects have been reported on the following organs: blood (hemolysis) and secondary effects on the kidney and liver. Human red blood cells have been shown to be significantly less sensitive to hemolysis than those of rodents and rabbits.

#### Developmental Toxicity

Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

## 12. Ecological Information

### ENVIRONMENTAL FATE

#### Movement & Partitioning

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).

**Henry's Law Constant (H):** 1.47E-08 atm\*m3/mole; 25 °C Estimated.

**Partition coefficient, n-octanol/water (log Pow):** 0.08 Estimated.

**Partition coefficient, soil organic carbon/water (Koc):** 1 Estimated.

#### Persistence and Degradability

Material is expected to be readily biodegradable.

**Theoretical Oxygen Demand:** 2.15 mg/mg

#### ECOTOXICITY

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

#### Fish Acute & Prolonged Toxicity

LC50, fathead minnow (*Pimephales promelas*), 96 h: > 1,000 mg/l

#### Aquatic Invertebrate Acute Toxicity

LC50, water flea *Daphnia magna*, static, 48 h, survival: > 5,000 mg/l

#### Toxicity to Micro-organisms

EC50; bacteria: > 1,000 mg/l

## 13. Disposal Considerations

This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 91/689/EEC. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required. Do not dump into any sewers, on the ground, or into any body of water.

## 14. Transport Information

### ROAD & RAIL

**Proper Shipping Name:** FLAMMABLE LIQUID, N.O.S.

**Technical Name:** ETHYLENE GLYCOL MONOPROPYL ETHER

**Hazard Class:** 3 **ID Number:** UN1993 **Packing Group:** PG III

**Classification:** F1

**Kemler Code:** 30

**Special Provisions:** Special provision 640E

**Environmental Hazard:** No

### OCEAN

**Proper Shipping Name:** FLAMMABLE LIQUID, N.O.S.

**Technical Name:** ETHYLENE GLYCOL MONOPROPYL ETHER

**Hazard Class:** 3 **ID Number:** UN1993 **Packing Group:** PG III

**EMS Number:** F-E,S-E

**Marine pollutant.:** No

**AIR**

**Proper Shipping Name:** FLAMMABLE LIQUID, N.O.S.  
**Technical Name:** ETHYLENE GLYCOL MONOPROPYL ETHER  
**Hazard Class:** 3 **ID Number:** UN1993 **Packing Group:** PG III  
**Cargo Packing Instruction:** 310  
**Passenger Packing Instruction:** 309  
**Environmental Hazard:** No

**INLAND WATERWAYS**

**Proper Shipping Name:** FLAMMABLE LIQUID, N.O.S.  
**Technical Name:** ETHYLENE GLYCOL MONOPROPYL ETHER  
**Hazard Class:** 3 **ID Number:** UN1993 **Packing Group:** PG III  
**Classification:** F1  
**Kemler Code:** 30  
**Special Provisions:** Special provision 640E

**Environmental Hazard:** No

**15. Regulatory Information**

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

The components of this product are on the EINECS inventory or are exempt from inventory requirements.

**EC Classification and User Label Information**

**Hazard Symbol:**

Xn - Harmful.

**Risk Phrases :**

R21 - Harmful in contact with skin.

R36 - Irritating to eyes.

**Safety Phrases :**

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37 - Wear suitable protective clothing and gloves.

S46 - If swallowed, seek medical advice immediately and show this container or label.

**Chemical Name** 2-(Propyloxy)ethanol; EGPE  
(EC Label) (EC # 220-548-6)

**16. Other Information**

**Risk-phrases in the Composition section**

R21 Harmful in contact with skin.

R36 Irritating to eyes.

**Product Literature**

Additional information on this product may be obtained by calling your sales or customer service contact. Ask for a product brochure.

**Revision**

Identification Number: 1982 / 1001 / Issue Date 2010/08/18 / Version: 5.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

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