



# SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

**Product name:** GREAT STUFF PRO™ Gasket

**Issue Date:** 07/24/2017

**Print Date:** 07/25/2017

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

---

**Product name:** GREAT STUFF PRO™ Gasket

**Recommended use of the chemical and restrictions on use**

**Identified uses:** For industrial use. 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.

**COMPANY IDENTIFICATION**

THE DOW CHEMICAL COMPANY  
2030 WILLARD H DOW CENTER  
MIDLAND MI 48674-0000  
UNITED STATES

**Customer Information Number:**

800-258-2436  
SDSQuestion@dow.com

**EMERGENCY TELEPHONE NUMBER**

**24-Hour Emergency Contact:** CHEMTREC +1 800-424-9300

**Local Emergency Contact:** 800-424-9300

---

## 2. HAZARDS IDENTIFICATION

---

**Hazard classification**

This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Flammable aerosols - Category 2

Gases under pressure - Liquefied gas

Eye irritation - Category 2A

**Label elements**

**Hazard pictograms**



Signal word: **WARNING!**

#### Hazards

Flammable aerosol.  
Contains gas under pressure; may explode if heated.  
Causes serious eye irritation.

#### Precautionary statements

##### Prevention

Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
Do not spray on an open flame or other ignition source.  
Pressurized container: Do not pierce or burn, even after use.  
Wash skin thoroughly after handling.  
Wear eye protection/ face protection.

##### Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/ attention.

##### Storage

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

#### Other hazards

No data available

---

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

---

This product is a mixture.

Component	CASRN	Concentration
Water	7732-18-5	<= 60.0 %
Polyurethane Resin	Not available	<= 40.0 %
Dipropylene glycol dimethyl ether	111109-77-4	<= 5.0 %
Ethanol	64-17-5	<= 5.0 %
Isobutane	75-28-5	<= 3.0 %

Propane	74-98-6	<= 2.0 %
Methyl ether	115-10-6	<= 2.0 %
Methanol	67-56-1	< 1.0 %
Ammonia	7664-41-7	< 1.0 %

---

## 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 not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

**Skin contact:** Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Suitable emergency safety shower facility should be available in 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. Suitable emergency eye wash facility should be immediately available.

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

**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), any additional important symptoms and effects are described in Section 11: Toxicology Information.

### Indication of any immediate medical attention and special treatment needed

**Notes to physician:** Maintain adequate ventilation and oxygenation of the patient. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless absolutely necessary. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

---

## 5. FIREFIGHTING MEASURES

---

**Suitable extinguishing media:** Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

**Unsuitable extinguishing media:** No data available

**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 vent and/or rupture due to fire. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. When product is stored in closed containers, a flammable atmosphere can develop. Flammable mixtures may exist within the vapor space of containers at room temperature. Flammable concentrations of vapor can accumulate at temperatures above flash point; see Section 9.

**Advice for firefighters**

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Water may not be effective in extinguishing fire. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. 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.

---

## 6. ACCIDENTAL RELEASE MEASURES

---

**Personal precautions, protective equipment and emergency procedures:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to section 7, Handling, for additional precautionary measures. 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. 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. 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. 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. Spills or discharge to natural waterways is likely to kill aquatic organisms.

**Methods and materials for containment and cleaning up:** Contain spilled material if possible. Pump with explosion-proof equipment. If available, use foam to smother or suppress. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Keep away from heat, sparks and flame. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. 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. Never use air pressure for transferring product. Avoid contact with eyes. Avoid breathing vapor. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**Conditions for safe storage:** Minimize sources of ignition, such as static build-up, heat, spark or flame. Keep container closed when not in use. Flammable mixtures may exist within the vapor space of containers at room temperature. Store in a dry place. Flammable vapors may accumulate in some storage situations. Avoid moisture. Avoid contact with air (oxygen). Store in accordance with good manufacturing practices.

### Storage stability

**Storage temperature:** 32 °C (90 °F)      **Storage Period:** 12 Month

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Dipropylene glycol dimethyl ether	Dow IHG	TWA	20 ppm
Ethanol	ACGIH	TWA	1,000 ppm
	ACGIH	STEL	1,000 ppm
	OSHA Z-1	TWA	1,900 mg/m <sup>3</sup> 1,000 ppm
Isobutane	ACGIH	STEL	1,000 ppm
Propane	ACGIH		Asphyxiant
	OSHA Z-1	TWA	1,800 mg/m <sup>3</sup> 1,000 ppm
Methyl ether	US WEEL	TWA	1,000 ppm
Methanol	ACGIH	TWA	200 ppm
	ACGIH	STEL	250 ppm
	OSHA Z-1	TWA	260 mg/m <sup>3</sup> 200 ppm
	ACGIH	TWA	SKIN, BEI
	ACGIH	STEL	SKIN, BEI
Ammonia	Dow IHG	TWA	10 ppm
	Dow IHG	STEL	30 ppm
	OSHA Z-1	TWA	35 mg/m <sup>3</sup> 50 ppm
	ACGIH	TWA	25 ppm, Ammonia
	ACGIH	STEL	35 ppm, Ammonia

### Exposure controls

**Engineering controls:** 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 in enclosed systems or with local exhaust ventilation. Exhaust systems should be designed to

move the air away from the source of vapor/aerosol generation and people working at this point. Lethal concentrations may exist in areas with poor ventilation.

#### Individual protection measures

**Eye/face protection:** Use chemical goggles.

#### Skin protection

**Hand protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Neoprene. Avoid gloves made of: Polyvinyl alcohol ("PVA"). 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.

**Other 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.

**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. When respiratory protection is required, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

---

### Appearance

Physical state	Aerosol containing a compressed gas
Color	white
Odor	Ammonia odor
Odor Threshold	No test data available
pH	9 - 9.9
Melting point/range	Not applicable
Freezing point	not determined
Boiling point (760 mmHg)	Not applicable
Flash point	<b>closed cup</b> -104 °C ( -155 °F) <i>Estimated.</i>
Evaporation Rate (Butyl Acetate = 1)	Not available
Flammability (solid, gas)	No data available
Lower explosion limit	not determined
Upper explosion limit	not determined
Vapor Pressure	No data available
Relative Vapor Density (air = 1)	Not applicable to liquids
Relative Density (water = 1)	Not applicable
Water solubility	No data available

<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Auto-ignition temperature</b>	No test data available
<b>Decomposition temperature</b>	No data available
<b>Kinematic Viscosity</b>	not determined
<b>Explosive properties</b>	Not explosive
<b>Oxidizing properties</b>	No
<b>Molecular weight</b>	No test data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

---

## 10. STABILITY AND REACTIVITY

---

**Reactivity:** No data available

**Chemical stability:** Stable under recommended storage conditions. See Storage, Section 7.  
Hygroscopic

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

**Conditions to avoid:** Avoid contact with air (oxygen). Exposure to elevated temperatures can cause product to decompose. Avoid moisture.

**Incompatible materials:** Avoid contact with: Bases. Oxidizers. Peroxides. Phosphorous compounds. Reducing agents. Avoid contact with metals such as: Alkali metals.

**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: Carbon monoxide. Carbon dioxide.

---

## 11. TOXICOLOGICAL INFORMATION

---

*Toxicological information appears in this section when such data is available.*

### Acute toxicity

#### Acute oral toxicity

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.

As product: Single dose oral LD50 has not been determined.

#### Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

#### Acute inhalation toxicity

In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen. May cause central nervous

system depression. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats).  
As product: The LC50 has not been determined.

**Skin corrosion/irritation**

Brief contact may cause slight skin irritation with local redness.  
May cause drying and flaking of the skin.

**Serious eye damage/eye irritation**

May cause eye irritation.  
May cause corneal injury.

**Sensitization**

Based on information for component(s):  
Skin contact may cause an allergic skin reaction in a small proportion of individuals.

For respiratory sensitization:  
No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Available data are inadequate to determine single exposure specific target organ toxicity.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Contains component(s) which have been reported to cause effects on the following organs in animals:  
kidney  
Liver  
adrenal gland

**Carcinogenicity**

No relevant data found.

**Teratogenicity**

Contains component(s) which caused birth defects in lab animals at doses nontoxic to the mother.  
Contains component(s) which, in laboratory animals, have been toxic to the fetus only at doses toxic to the mother.

**Reproductive toxicity**

No relevant data found.

**Mutagenicity**

In vitro genetic toxicity studies were negative for component(s) tested. Contains component(s) which were negative in some animal genetic toxicity studies and positive in others.

**Aspiration Hazard**

Based on available information, aspiration hazard could not be determined.

**COMPONENTS INFLUENCING TOXICOLOGY:**

**Polyurethane Resin**

**Acute oral toxicity**

LD50, Rat, > 5,000 mg/kg Estimated.



**Acute dermal toxicity**

The dermal LD50 has not been determined.

**Acute inhalation toxicity**

The LC50 has not been determined.

**Dipropylene glycol dimethyl ether**

**Acute oral toxicity**

LD50, Rat, 3,300 mg/kg

**Acute dermal toxicity**

LD50, Rat, > 2,000 mg/kg

**Acute inhalation toxicity**

LC50, Rat, 4 Hour, vapour, > 5.25 mg/l No deaths occurred at this concentration.

**Ethanol**

**Acute oral toxicity**

LD50, Rat, > 7,000 mg/kg

LDLo, human, 1,400 mg/kg

**Acute dermal toxicity**

LD50, Rabbit, > 15,800 mg/kg

**Acute inhalation toxicity**

LC50, Rat, 4 Hour, vapour, 124.7 mg/l

**Isobutane**

**Acute oral toxicity**

Single dose oral LD50 has not been determined.

**Acute dermal toxicity**

The dermal LD50 has not been determined.

**Acute inhalation toxicity**

LC50, Mouse, 4 Hour, gas, 260,200 mg/l

**Propane**

**Acute oral toxicity**

Single dose oral LD50 has not been determined.

**Acute dermal toxicity**

The dermal LD50 has not been determined.

**Acute inhalation toxicity**

In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). May cause central nervous system effects. At air concentrations <1000 ppm, propane exerts very little physiological action; at 100,000 ppm and above it may produce dizziness or other central nervous system effects. Excessive exposure may cause headache, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects, including death. Based on the available data, respiratory irritation was not observed.

LC50, Rat, male and female, 4 Hour, vapour, > 425000 ppm

**Methyl ether**

**Acute oral toxicity**

Single dose oral LD50 has not been determined.

**Acute dermal toxicity**

The dermal LD50 has not been determined.

**Acute inhalation toxicity**

LC50, Rat, 4 Hour, gas, 164000 ppm

**Methanol**

**Acute oral toxicity**

Methanol is highly toxic to humans and may cause central nervous system effects, visual disturbances up to blindness, metabolic acidosis, and degenerative damage to other organs including liver, kidney, and heart. Effects may be delayed. LD50, Rat, > 5,000 mg/kg

Lethal Dose, Humans, 340 mg/kg Estimated.

Lethal Dose, Humans, 29 - 237 ml Estimated.

**Acute dermal toxicity**

Effects of methanol are the same as observed via oral and inhalation exposure and include central nervous system (CNS) depression, visual impairment up to blindness, metabolic acidosis, with effects on organ systems such as liver, kidneys and heart, even death. LD50, Rabbit, 15,800 mg/kg

**Acute inhalation toxicity**

LC50, Rat, 4 Hour, vapour, 3 mg/l

**Ammonia**

**Acute oral toxicity**

Single dose oral LD50 has not been determined.

**Acute dermal toxicity**

The dermal LD50 has not been determined.

**Acute inhalation toxicity**

LC50, Rat, male, 1 Hour, dust/mist, 9.850 mg/l

---

## **12. ECOLOGICAL INFORMATION**

---

*Ecotoxicological information appears in this section when such data is available.*

**Toxicity**

**Polyurethane Resin**

**Acute toxicity to fish**

Not expected to be acutely toxic, but material in pellet or bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

**Dipropylene glycol dimethyl ether****Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).  
LC50, Poecilia reticulata (guppy), static test, 96 Hour, > 1,000 mg/l  
NOEC sublethal, Oncorhynchus mykiss (rainbow trout), flow-through test, 14 Hour, > 300 mg/l

**Acute toxicity to aquatic invertebrates**

LC50, Daphnia magna (Water flea), static test, 24 Hour, > 1,000 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 10 mg/l  
LOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 32 mg/l  
MATC (Maximum Acceptable Toxicant Level), Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 18 mg/l

**Toxicity to soil-dwelling organisms**

LC50, Eisenia fetida (earthworms), 14 d, survival, > 1,000 mg/kg

**Ethanol****Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).  
LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 Hour, 11,200 - 13,000 mg/l, Method Not Specified.

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), 48 Hour, 5,414 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

EbC50, Skeletonema costatum (marine diatom), 5 d, Biomass, 10,943 - 11,619 mg/l, OECD Test Guideline 201 or Equivalent

**Isobutane****Acute toxicity to fish**

No relevant data found.

**Propane****Acute toxicity to fish**

No relevant data found.

**Methyl ether****Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).  
LC50, Poecilia reticulata (guppy), semi-static test, 96 Hour, > 4,000 mg/l

**Acute toxicity to aquatic invertebrates**

LC50, Daphnia magna (Water flea), 48 Hour, > 4,000 mg/l, OECD Test Guideline 202 or Equivalent

**Methanol**

**Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).  
LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, 19,000 mg/l, Method Not Specified.

**Acute toxicity to aquatic invertebrates**

LC50, Daphnia magna (Water flea), 24 Hour, > 10,000 mg/l, Method Not Specified.

**Toxicity to bacteria**

IC50, activated sludge, 3 Hour, > 1,000 mg/l

**Ammonia**

**Acute toxicity to fish**

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).  
LC50, Fish, 96 Hour, 0.89 mg/l

**Acute toxicity to aquatic invertebrates**

LC50, Daphnia magna (Water flea), static test, 48 Hour, 101 mg/l

**Persistence and degradability**

**Polyurethane Resin**

**Biodegradability:** This water-insoluble polymeric solid is expected to be inert in the environment. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

**Dipropylene glycol dimethyl ether**

**Biodegradability:** Material is inherently biodegradable (reaches > 20% biodegradation in OECD test(s) for inherent biodegradability). Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

10-day Window: Fail

**Biodegradation:** 18 - 32 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301B or Equivalent

10-day Window: Not applicable

**Biodegradation:** 25 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 302B or Equivalent

**Theoretical Oxygen Demand:** 2.17 mg/mg

**Photodegradation**

**Test Type:** Half-life (indirect photolysis)

**Sensitizer:** OH radicals

**Atmospheric half-life:** 3.8 Hour

**Method:** Estimated.

**Ethanol**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

**Biodegradation:** > 70 %  
**Exposure time:** 5 d  
**Method:** OECD Test Guideline 301D or Equivalent

**Theoretical Oxygen Demand:** 2.08 mg/mg

**Photodegradation**  
**Test Type:** Half-life (indirect photolysis)  
**Sensitizer:** OH radicals  
**Atmospheric half-life:** 2.99 d  
**Method:** Estimated.

**Isobutane**

**Biodegradability:** Biodegradation may occur under aerobic conditions (in the presence of oxygen).

**Theoretical Oxygen Demand:** 3.58 mg/mg

**Photodegradation**  
**Test Type:** Half-life (indirect photolysis)  
**Sensitizer:** OH radicals  
**Atmospheric half-life:** 4.4 d  
**Method:** Estimated.

**Propane**

**Biodegradability:** No relevant data found.

**Theoretical Oxygen Demand:** 3.64 mg/mg

**Photodegradation**  
**Test Type:** Half-life (indirect photolysis)  
**Sensitizer:** OH radicals  
**Atmospheric half-life:** 8.4 d  
**Method:** Estimated.

**Methyl ether**

**Biodegradability:** Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

10-day Window: Fail  
**Biodegradation:** 5 %  
**Exposure time:** 28 d  
**Method:** OECD Test Guideline 301A or Equivalent

**Methanol**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass  
**Biodegradation:** 99 %  
**Exposure time:** 28 d  
**Method:** OECD Test Guideline 301D or Equivalent

**Theoretical Oxygen Demand:** 1.50 mg/mg

**Chemical Oxygen Demand:** 1.49 mg/mg Dichromate

**Biological oxygen demand (BOD)**

Incubation Time	BOD
5 d	72 %
20 d	79 %

**Photodegradation**

**Test Type:** Half-life (indirect photolysis)

**Sensitizer:** OH radicals

**Atmospheric half-life:** 8 - 18 d

**Method:** Estimated.

**Ammonia**

**Biodegradability:** Material is expected to be readily biodegradable. Biodegradation may occur under aerobic conditions (in the presence of oxygen).

**Theoretical Oxygen Demand:** 3.76 mg/mg Estimated.

**Bioaccumulative potential**

**Polyurethane Resin**

**Bioaccumulation:** No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

**Dipropylene glycol dimethyl ether**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 0.42 Measured

**Bioconcentration factor (BCF):** 4 Oncorhynchus mykiss (rainbow trout) 43 d Measured

**Ethanol**

**Bioaccumulation:** Bioaccumulation is unlikely. Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** -0.31 Measured

**Isobutane**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 2.76 Measured

**Propane**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 2.36 Measured

**Methyl ether**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 0.10 Measured

**Methanol**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** -0.77 Measured

**Bioconcentration factor (BCF):** < 10 Fish Measured

#### Ammonia

**Bioaccumulation:** Partitioning from water to n-octanol is not applicable.

#### **Mobility in soil**

#### Polyurethane Resin

In the terrestrial environment, material is expected to remain in the soil.

In the aquatic environment, material will sink and remain in the sediment.

#### Dipropylene glycol dimethyl ether

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient (Koc):** 2 Estimated.

#### Ethanol

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient (Koc):** 1.0 Estimated.

#### Isobutane

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient (Koc):** 35 Estimated.

#### Propane

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient (Koc):** 24 - 460 Estimated.

#### Methyl ether

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient (Koc):** 1.29 - 14 Estimated.

#### Methanol

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient (Koc):** 0.44 Estimated.

#### Ammonia

No specific, relevant data available for assessment.

---

## **13. DISPOSAL CONSIDERATIONS**

---

**Disposal methods:** 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

---

### DOT

<b>Proper shipping name</b>	Aerosols
<b>UN number</b>	UN 1950
<b>Class</b>	2.1
<b>Packing group</b>	
<b>Reportable Quantity</b>	Ammonia

### Classification for SEA transport (IMO-IMDG):

<b>Proper shipping name</b>	AEROSOLS
<b>UN number</b>	UN 1950
<b>Class</b>	2.1
<b>Packing group</b>	
<b>Marine pollutant</b>	No
<b>Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code</b>	Consult IMO regulations before transporting ocean bulk

### Classification for AIR transport (IATA/ICAO):

<b>Proper shipping name</b>	Aerosols, flammable
<b>UN number</b>	UN 1950
<b>Class</b>	2.1
<b>Packing group</b>	

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

---

## 15. REGULATORY INFORMATION

---

### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Acute Health Hazard

Fire Hazard

Sudden Release of Pressure Hazard



**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103**

Calculated RQ exceeds reasonably attainable upper limit.

Components	CASRN	RQ (RCRA Code)
Methanol	67-56-1	5000 lbs RQ
Methanol	67-56-1	100 lbs RQ (F003)
Ammonia	7664-41-7	100 lbs RQ

**Pennsylvania Worker and Community Right-To-Know Act:**

The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	CASRN
Ethanol	64-17-5
Isobutane	75-28-5
Methyl ether	115-10-6

**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)**

WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

Components	CASRN
Ethanol	64-17-5
Methyl isobutyl ketone	108-10-1

**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)**

WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

Components	CASRN
Ethanol	64-17-5
Methanol	67-56-1
Methyl isobutyl ketone	108-10-1

**United States TSCA Inventory (TSCA)**

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

---

**16. OTHER INFORMATION**

---

**Revision**

Identification Number: 102997244 / A001 / Issue Date: 07/24/2017 / Version: 2.0

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

**Legend**

ACGIH	USA. American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV)
Asphyxiant	Asphyxiant

Dow IHG	Dow Industrial Hygiene Guideline
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
SKIN, BEI	Absorbed via Skin, Biological Exposure Indice
STEL	Short term exposure limit
TWA	Time weighted average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

**Information Source and References**

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY 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.