

**SECTION 1: Identification****1.1. Identification**

Product form : Polyol Resin Blend
Trade name : PC 2800 HFO
Product code : PC 2800 HFO - All Reactivities
Other means of identification : Urethane System Resin Component, B – Component, B – Side, Polyol Resin

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

Use of the substance/mixture : Two-Component, closed-cell, polyurethane foam system specifically designed to provide a high performance, light weight roofing system
Use of the substance/mixture : A component for the production of spray polyurethane foam

1.3. Details of the supplier of the safety data sheet

PolyCon LLC
1755 Transcentral Court, Ste. 400
Houston, TX 77032
safety@polyconspf.com

1.4. Emergency telephone number

Emergency number : CHEMTREC (800) 424-9300

SECTION 2: Hazard(s) identification**2.1. Classification of the substance or mixture****GHS-US classification**

Acute toxicity (oral), Category 4 H302
Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 1 H318

Full text of H-statements: see section 16

2.2. Label elements**GHS-US labeling**

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H302 - Harmful if swallowed
H315 - Causes skin irritation
H318 - Causes serious eye damage

Precautionary statements (GHS-US) : P264 - Wash hands, face thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear eye protection, protective gloves, protective clothing
P301+P312 - If swallowed: Call a POISON CENTER if you feel unwell
P302+P352 - If on skin: Wash with plenty of water
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a doctor, a POISON CENTER
P330 - Rinse mouth
P332+P313 - If skin irritation occurs: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P501 - Dispose of contents/container to comply with applicable local, national and 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

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Oxirane, methyl-, polymer with oxirane, ether with 2,6-bis[[bis(2-hydroxyethyl)amino]methyl]-4-nonylphenol (5:1)	(CAS No) 52019-35-9	<30	Skin Irrit. 2, H315 Eye Dam. 1, H318
2-Propanol, 1-chloro-, phosphate (3:1)	(CAS No) 13674-84-5	<20	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332
1-Propanol, 2,2-dimethyl-, tribromo derivative	(CAS No) 36483-57-5	<10	Eye Irrit. 2A, H319
Triethyl phosphate	(CAS No) 78-40-0	<7.5	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319
Diethylene glycol	(CAS No) 111-46-6	<6	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
1,3-Propanediamine, N,N-bis[3-(dimethylamino)propyl]-N',N'-dimethyl-	(CAS No) 33329-35-0	<1.5	Acute Tox. 4 (Dermal), H312 Skin Corr. 1C, H314 Eye Dam. 1, H318
Ethylene glycol	(CAS No) 107-21-1	0.125 - 1	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Bis(2-dimethylaminoethyl) ether	(CAS No) 3033-62-3	<0.2	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1B, H314 Eye Dam. 1, H318

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: In all cases of doubt, or when symptoms persist, seek medical attention.
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. In case of breathing difficulties administer oxygen. In case of irregular breathing or respiratory arrest provide artificial respiration. Seek medical advice.
First-aid measures after skin contact	: Remove contaminated clothing immediately. Wash skin thoroughly with mild soap and water. Seek medical attention immediately.
First-aid measures after eye contact	: Rinse immediately with plenty of water for 15 minutes. Contact lenses should be removed. Immediately get medical attention.
First-aid measures after ingestion	: If swallowed, rinse mouth with water (only if the person is conscious). Call a POISON CENTER or doctor/physician. Give water to drink if victim completely conscious/alert. Never give anything by mouth to an unconscious person. Seek medical attention immediately. If unconscious, place in the recovery position and seek medical advice.

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

Symptoms/injuries	: Causes severe skin burns and eye damage.
Symptoms/injuries after inhalation	: Inhalation of mist or aerosol may cause irritation to nose and throat. May cause irritation to the respiratory tract.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Corrosive to eyes. Causes serious eye damage.
Symptoms/injuries after ingestion	: Harmful if swallowed. At levels above the recommended exposure limit, the fluorocarbon acts as a weak narcotic. Acute overexposure causes tremors, confusion, irritation, suffocation, and may result in cardiac sensitization.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water. Dry extinguishing powder. Carbon dioxide. Foam.
Unsuitable extinguishing media	: None known.



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5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Protective equipment for firefighters : Use self-contained breathing apparatus and chemically protective clothing.
Other information : Prevent entry to sewers and public waters.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Spills of this product present a serious slipping hazard. Avoid breathing mist or vapor. Avoid contact with skin, eyes and clothing.

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing. Refer to section 8.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.
Emergency procedures : Ensure adequate ventilation.

6.2. Environmental precautions

Prevent entry to sewers and public waters. If the product has escaped into a water course, into the drainage system, or has contaminated the ground or vegetation, notify the competent authorities.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into inert absorbent material. Sweep or shovel spills into appropriate container for disposal. Ensure all national/local regulations are observed.

6.4. Reference to other sections

Refer to sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid mixing with air or use for any purpose above atmospheric pressure. Product should not be mixed with air above atmospheric pressure for leak testing or any other purpose. Use dry nitrogen to transfer or leak test equipment pressurized with product.
Hygiene measures : Wash contaminated clothing prior to re-use. Always wash hands and face immediately after handling this product, and once again before leaving the workplace. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide local exhaust or general room ventilation. A washing facility/water for eye and skin cleaning purposes should be present.
Storage conditions : Keep out of direct sunlight. Store in original container. Keep container tightly closed in a cool, well-ventilated place. Keep away from heat. Do not freeze. Product that is frozen and/or tending to sedimentation can be liquefied or homogenized by careful application of indirect heat (do not use flames or direct contact with a heat source). Protect from moisture.
Incompatible materials : Keep away from strong acids, strong bases and oxidizing agents.
Storage temperature : 21 - 26 °C (70 - 80 °F)

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ethylene glycol (107-21-1)		
ACGIH	ACGIH Ceiling (mg/m ³)	100 mg/m ³ (aerosol only)
Bis(2-dimethylaminoethyl) ether (3033-62-3)		
ACGIH	ACGIH TWA (ppm)	0.05 ppm
ACGIH	ACGIH STEL (ppm)	0.15 ppm

8.2. Exposure controls

Appropriate engineering controls : Provide local exhaust or general room ventilation. Ensure adequate ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment	: Protective goggles. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.
	   
Hand protection	: Wear suitable gloves resistant to chemical penetration. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
Eye protection	: Eye protection, including both chemical splash goggles and face shield, must be worn when the possibility exists for eye contact due to spraying liquid or airborne particles.
Skin and body protection	: Wear protective clothing.
Respiratory protection	: Wear a self-contained breathing apparatus and appropriate personal protective equipment (PPE). An approved organic vapor respirator/supplied air or self-contained breathing apparatus must be used when vapor concentration exceeds applicable exposure limits.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Dark orange brown
Odor	: Amine-like
Odor threshold	: No data available
pH	: ≥ 7
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: $> 200\text{ }^{\circ}\text{C}$ (closed cup)
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: No data available
Relative vapor density at $20\text{ }^{\circ}\text{C}$	: No data available
Density	: $1.15 - 1.17\text{ g/cm}^3$ @ $25\text{ }^{\circ}\text{C}$ (Bulk Density)
Solubility	: Water: Slightly soluble
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: $800 - 1000\text{ mPa.s}$ @ $23\text{ }^{\circ}\text{C}$

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

No additional information available



10.4. Conditions to Avoid

Temperatures > 26 °C. Moisture. Direct sunlight. Heat.

10.5. Incompatible materials

Strong oxidizing agents. Strong acids, bases.

10.6. Hazardous decomposition products

Toxic fumes. Carbon oxides (CO, CO₂). Nitrogen oxides. Unburned hydrocarbons. Possibly carbonyl fluoride. Hydrogen fluoride.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

PC 2800	
ATE US (oral)	1630.432 mg/kg bodyweight
Ethylene glycol (107-21-1)	
LD50 oral rat	4700 mg/kg
LD50 dermal rat	10600 mg/kg
ATE US (oral)	500.000 mg/kg bodyweight
ATE US (dermal)	10600.000 mg/kg bodyweight
2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)	
LD50 oral rat	500 mg/kg
LD50 dermal rabbit	1230 mg/kg
LC50 inhalation rat (mg/l)	5 mg/l/4h
ATE US (oral)	500.000 mg/kg bodyweight
ATE US (dermal)	1230.000 mg/kg bodyweight
ATE US (vapors)	5.000 mg/l/4h
ATE US (dust,mist)	5.000 mg/l/4h
1-Propanol, 2,2-dimethyl-, tribromo derivative (36483-57-5)	
LD50 oral rat	1630 mg/kg
Bis(2-dimethylaminoethyl) ether (3033-62-3)	
LD50 oral rat	910 mg/kg
LD50 dermal rabbit	238 mg/kg
LC50 inhalation rat (ppm)	117 ppm (Exposure time: 6 h)
ATE US (oral)	910.000 mg/kg bodyweight
ATE US (dermal)	238.000 mg/kg bodyweight
ATE US (gases)	4500.000 ppmv/4h
ATE US (vapors)	11.000 mg/l/4h
ATE US (dust,mist)	1.500 mg/l/4h
Triethyl phosphate (78-40-0)	
LD50 oral rat	1100 - 1600 mg/kg
ATE US (oral)	1100.000 mg/kg bodyweight
1,3-Propanediamine, N,N-bis[3-(dimethylamino)propyl]-N',N'-dimethyl- (33329-35-0)	
ATE US (dermal)	1100.000 mg/kg bodyweight
Diethylene glycol (111-46-6)	
LD50 oral rat	12565 mg/kg
LD50 dermal rabbit	11890 mg/kg
ATE US (oral)	500.000 mg/kg bodyweight
ATE US (dermal)	11890.000 mg/kg bodyweight

Skin corrosion/irritation : Causes skin irritation.

pH: >= 7

Serious eye damage/irritation : Causes serious eye damage.

pH: >= 7

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified



Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: Inhalation of mist or aerosol may cause irritation to nose and throat. May cause irritation to the respiratory tract.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Corrosive to eyes. Causes serious eye damage.
Symptoms/injuries after ingestion	: Harmful if swallowed. At levels above the recommended exposure limit, the fluorocarbon acts as a weak narcotic. Acute overexposure causes tremors, confusion, irritation, suffocation, and may result in cardiac sensitization.

SECTION 12: Ecological information

12.1. Toxicity

Ethylene glycol (107-21-1)	
LC50 fish 1	41000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	46300 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	14 - 18 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)	
LC50 fish 2	180 mg/l (Exposure time: 96 h - Species: Leuciscus idus [static])
EC50 other aquatic organisms 2	4 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata)
Diethylene glycol (111-46-6)	
LC50 fish 1	75200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	84000 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Ethylene glycol (107-21-1)	
Log Pow	-1.93
2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)	
BCF fish 1	1.9 - 4.6
Log Pow	2.59
Triethyl phosphate (78-40-0)	
Log Pow	0.8 - 1.11
Diethylene glycol (111-46-6)	
BCF fish 1	100 - 180
Log Pow	-1.98 (at 25 °C)

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Product wastes can often be incinerated in approved facilities. Consult the appropriate authorities about waste disposal.
Additional information	: Do not re-use empty containers. Do not dispose of waste into sewer. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Container Disposal: Steel drums must be emptied and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill. Refer to 40 CFR § 261.7 (residues of hazardous waste in empty containers). Decontaminate containers prior to disposal. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. Ensure all national/local regulations are observed.
Ecology - waste materials	: Avoid release to the environment. Do not allow into drains or water courses.



SECTION 14: Transport Information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

TDG

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

Oxirane, methyl-, polymer with oxirane, ether with 2,6-bis[[bis(2-hydroxyethyl)amino]methyl]-4-nonylphenol (5:1) (52019-35-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Ethylene glycol (107-21-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
1-Propanol, 2,2-dimethyl-, tribromo derivative (36483-57-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Bis(2-dimethylaminoethyl) ether (3033-62-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Triethyl phosphate (78-40-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
1,3-Propanediamine, N,N-bis[3-(dimethylamino)propyl]-N',N'-dimethyl- (33329-35-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Diethylene glycol (111-46-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. US State regulations

No additional information available

SECTION 16: Other information

Indication of changes	: according to the federal final rule of hazard communication revised on 2012 (HazCom 2012).
Revision date	: 09/29/2016
Sources of Key data	: Data sources: SDS - Safety Data Sheet.
Abbreviations and acronyms	: CAS - Chemical Abstracts Service. CSR - Chemical Safety Report. EC - European Community. EEC - European Economic Community. MSDS - Material Safety Data Sheet. PBT - Persistent, Bioaccumulative and Toxic substance. SDS - Safety Data Sheet. STEL- Short-Term Exposure Limit. TLV- Threshold Limit Value. TWA- Time Weighted Average. vPvB - Very Persistent and Very Bioaccumulative.

Full text of H-statements:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4



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Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Corr. 1C	Skin corrosion/irritation Category 1C
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H302	Harmful if swallowed
H311	Toxic in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H373	May cause damage to organs through prolonged or repeated exposure

SDS US (GHS HazCom 2012)

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