



# SAFETY DATA SHEET

Revision Date 09-Apr-2019

Version 5

## 1. IDENTIFICATION

### Product identifier

**Product Name** PERMA SHIELD GASKET DRESSING & FLANGE SEALANT 2 FL.OZ

### Other means of identification

**Product Code** 85420

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

**Recommended Use** Sealant

**Uses advised against** No information available

### Details of the supplier of the safety data sheet

#### Manufacturer Address

ITW Permatex  
6875 Parkland Blvd.  
Solon, Ohio 44139 USA  
Telephone: 1-87-Permatex  
(866) 732-9502

#### 24-hour emergency phone number

Chem-Tel: 800-255-3924  
International Emergency:  
00+1+ 813-248-0585  
Contract Number: MIS0003453

#### May Also Be Distributed by:

ITW Permatex Canada  
101-2360 Bristol Circle  
Oakville, ON Canada L6H 6M5  
Telephone: (800) 924-6994

**E-mail address:** mail@permatex.com

## 2. HAZARDS IDENTIFICATION

### Classification

#### **OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2A
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Flammable liquids	Category 2

### Label elements

#### Emergency Overview

#### Signal word

**Danger**

Causes serious eye irritation  
May cause allergy or asthma symptoms or breathing difficulties if inhaled  
May cause an allergic skin reaction  
May cause respiratory irritation

May cause drowsiness or dizziness  
May cause damage to organs through prolonged or repeated exposure  
Highly flammable liquid and vapor



**Appearance** Blue

**Physical state** Liquid

**Odor** Ketone

**Precautionary Statements - Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Use personal protective equipment as required  
Use only outdoors or in a well-ventilated area  
Do not breathe dust/fume/gas/mist/vapors/spray  
In case of inadequate ventilation wear respiratory protection  
Wash face, hands and any exposed skin thoroughly after handling  
Contaminated work clothing should not be allowed out of the workplace  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
Keep container tightly closed  
Use non-sparking tools  
Take precautionary measures against static discharge  
Keep cool

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention

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

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish.

**Precautionary Statements - Storage**

Store locked up

Store in a well-ventilated place. Keep container tightly closed

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Not applicable

**Other Information**

Not applicable

Unknown acute toxicity

13.729 % of the mixture consists of ingredient(s) of unknown toxicity

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS No	Weight-%
ACETONE	67-64-1	30 - 60
DIPHENYLMETHANEDIISOCYANATE	101-68-8	1 - 5
~DIPHENYLMETHANE-4,4 -DI-ISOCYANATE ~	5873-54-1	0.1 - 1
ETHANOL	64-17-5	0.1 - 1
~DIPHENYLMETHANE-4,4 -DI-ISOCYANATE ~	2536-05-2	0.1 - 1

#### 4. FIRST AID MEASURES

##### Description of first aid measures

<b>General advice</b>	Get medical advice/attention if you feel unwell.
<b>Eye contact</b>	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.
<b>Skin contact</b>	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Inhalation</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor.
<b>Ingestion</b>	IF SWALLOWED: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.
<b>Self-protection of the first aider</b>	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

##### Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction.
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##### Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	Treat symptomatically.
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#### 5. FIRE-FIGHTING MEASURES

##### Suitable extinguishing media

Carbon dioxide (CO2), Dry chemical, Foam

##### Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire

##### Specific hazards arising from the chemical

Highly flammable. Risk of ignition. Vapors may travel to source of ignition and flash back.

##### Explosion data

<b>Sensitivity to Mechanical Impact</b>	None.
<b>Sensitivity to Static Discharge</b>	None.

##### Protective equipment and precautions for firefighters

Move containers from fire area if you can do it without risk.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Ensure adequate ventilation, especially in confined areas. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Use personal protective equipment as required.

### Environmental precautions

**Environmental precautions** See Section 12 for additional Ecological Information.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Eliminate all ignition sources if safe to do so. Ensure adequate ventilation. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Use personal protective equipment as required.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Wash contaminated clothing before reuse. Use personal protective equipment as required. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a cool, well-ventilated place. Store locked up.

**Incompatible materials** Strong oxidizing agents, Bases, Reducing agents, Amines

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
ACETONE 67-64-1	STEL: 500 ppm TWA: 250 ppm	TWA: 1000 ppm TWA: 2400 mg/m <sup>3</sup> (vacated) TWA: 750 ppm (vacated) TWA: 1800 mg/m <sup>3</sup> (vacated) STEL: 2400 mg/m <sup>3</sup> The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors. (vacated) STEL: 1000 ppm	IDLH: 2500 ppm TWA: 250 ppm TWA: 590 mg/m <sup>3</sup>
DIPHENYLMETHANEDIISOCYANATE 101-68-8	TWA: 0.005 ppm	(vacated) Ceiling: 0.02 ppm regulated under Methylene bisphenyl isocyanate (vacated) Ceiling: 0.2 mg/m <sup>3</sup> regulated under Methylene bisphenyl isocyanate Ceiling: 0.02 ppm Ceiling: 0.2 mg/m <sup>3</sup>	IDLH: 75 mg/m <sup>3</sup> Ceiling: 0.020 ppm 10 min Ceiling: 0.2 mg/m <sup>3</sup> 10 min TWA: 0.005 ppm TWA: 0.05 mg/m <sup>3</sup>
ETHANOL	STEL: 1000 ppm	TWA: 1000 ppm	IDLH: 3300 ppm

64-17-5		TWA: 1900 mg/m <sup>3</sup> (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m <sup>3</sup>	TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup>
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NIOSH IDLH *Immediately Dangerous to Life or Health*

**Other Information** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Appropriate engineering controls**

**Engineering Controls** Showers  
Eyewash stations  
Ventilation systems

**Individual protection measures, such as personal protective equipment**

- Eye/face protection** Wear safety glasses with side shields (or goggles).
- Skin and body protection** Wear protective natural rubber, nitrile rubber, Neoprene™ or PVC gloves.
- Respiratory protection** Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing is recommended.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

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

**Physical state** Liquid  
**Appearance** Blue  
**Odor** Ketone  
**Odor threshold** No information available

Property	Values	Remarks • Method
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	54 °C / 129 °F	
Flash point	-18 °C / 0 °F	
Evaporation rate	< 1	Butyl acetate = 1
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	12.8%	
Lower flammability limit:	2.6%	
Vapor pressure	No information available	
Vapor density	>1	Air = 1
Relative density	1.04	
Water solubility	Partially soluble	
Solubility(ies)	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	
<b><u>Other Information</u></b>		
Softening point	No information available	
Molecular weight	No information available	
VOC Content (%)	<1%	

Density No information available  
Bulk density No information available  
SADT (self-accelerating decomposition temperature) No information available

## 10. STABILITY AND REACTIVITY

**Reactivity**

No information available

**Chemical stability**

Stable under normal conditions

**Possibility of Hazardous Reactions**

None under normal processing.

**Conditions to avoid**

Heat, flames and sparks.

**Incompatible materials**

Strong oxidizing agents, Bases, Reducing agents, Amines

**Hazardous Decomposition Products**

Carbon oxides  
Nitrogen oxides (NOx)  
Isocyanates

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Inhalation** May cause sensitization by inhalation. May cause drowsiness or dizziness.  
**Eye contact** Contact with eyes may cause irritation. May cause redness and tearing of the eyes.  
**Skin contact** May cause skin irritation and/or dermatitis. May cause sensitization by skin contact.  
**Ingestion** Ingestion may cause irritation to mucous membranes.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
ACETONE 67-64-1	= 5800 mg/kg ( Rat )	> 15700 mg/kg ( Rabbit )	= 50100 mg/m <sup>3</sup> ( Rat ) 8 h
DIPHENYLMETHANEDIISOCYANATE 101-68-8	= 31600 mg/kg ( Rat ) = 9200 mg/kg ( Rat )	-	= 369 mg/m <sup>3</sup> ( Rat ) 4 h
ETHANOL 64-17-5	= 7060 mg/kg ( Rat )	-	= 124.7 mg/L ( Rat ) 4 h

**Information on toxicological effects**

**Symptoms** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Sensitization** No information available.  
**Germ cell mutagenicity** No information available.  
**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
DIPHENYLMETHANEDIISOCYANATE 101-68-8	-	Group 3	-	-
ETHANOL	A3	Group 1	Known	X

64-17-5				
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ACGIH (American Conference of Governmental Industrial Hygienists)  
 A3 - *Animal Carcinogen*  
 IARC (International Agency for Research on Cancer)  
 Group 1 - *Carcinogenic to Humans*  
 Not classifiable as a human carcinogen  
 NTP (National Toxicology Program)  
 Known - *Known Carcinogen*  
 OSHA (Occupational Safety and Health Administration of the US Department of Labor)  
 X - *Present*

**Target Organ Effects** Central nervous system, Eyes, Respiratory system, Skin.

The following values are calculated based on chapter 3.1 of the GHS document .

**ATEmix (oral)** 10893 mg/kg  
**ATEmix (dermal)** 32023 mg/kg  
**ATEmix (inhalation-dust/mist)** 107.8 mg/l

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

0.049 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Mobility**

No information available.

Chemical Name	Partition coefficient
ACETONE 67-64-1	-0.24
ETHANOL 64-17-5	-0.32

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Disposal of wastes** This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

**Contaminated packaging** Do not reuse container.

**US EPA Waste Number** D001

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
ACETONE 67-64-1	Ignitable
ETHANOL 64-17-5	Toxic Ignitable

**14. TRANSPORT INFORMATION**

**DOT**

UN/ID No 1133  
 Proper shipping name: Adhesives, Limited Quantity (LQ)  
 Hazard Class 3  
 Packing Group II  
 Emergency Response Guide Number 128

**IATA**

UN/ID No ID 8000  
 Proper shipping name: Consumer commodity  
 Hazard Class 9  
 ERG Code 9L

**IMDG**

UN/ID No 1133  
 Proper shipping name: Adhesives, Limited Quantity (LQ)  
 Hazard Class 3  
 Packing Group II  
 EmS-No F-E, S-D

**15. REGULATORY INFORMATION**

**International Inventories**

TSCA Complies  
 DSL/NDSL Complies  
 EINECS/ELINCS Complies  
 ENCS Not determined  
 IECSC Complies  
 KECL Complies  
 PICCS Complies  
 AICS Not determined

**Legend:**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List  
 EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
 ENCS - Japan Existing and New Chemical Substances  
 IECSC - China Inventory of Existing Chemical Substances  
 KECL - Korean Existing and Evaluated Chemical Substances  
 PICCS - Philippines Inventory of Chemicals and Chemical Substances  
 AICS - Australian Inventory of Chemical Substances

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] - 9016-87-9	1.0
DIPHENYLMETHANEDIISOCYANATE - 101-68-8	1.0

**SARA 311/312 Hazard Categories**

Acute health hazard Yes  
 Chronic Health Hazard No  
 Fire hazard Yes  
 Sudden release of pressure hazard No



Reactive Hazard

No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
ACETONE 67-64-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
DIPHENYLMETHANEDIISOCYANATE 101-68-8	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

**US State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
ETHANOL - 64-17-5	Carcinogen Developmental

- Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage
- Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
ACETONE 67-64-1	X	X	X
SILICA, AMORPHOUS 112926-00-8	X	X	X
DIPHENYLMETHANE DIISOCYANATE [ISOMERS AND HOMOLOGUES] 9016-87-9	X	-	-
DIPHENYLMETHANEDIISOCYANATE 101-68-8	X	X	X
ETHANOL 64-17-5	X	X	X
-DIPHENYLMETHANE-4,4 -DI-ISOCYANANTE - 2536-05-2	X	-	-

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**WHMIS Hazard Class**

B2 - Flammable liquid, D2B - Toxic materials

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

<b>NFPA</b>	Health hazards 2	Flammability 2	Instability 0	-
<b>HMIS</b>	Health hazards 2	Flammability 2	Physical hazards 0	Personal protection B

NFPA (National Fire Protection Association)  
HMIS (Hazardous Material Information System)

Revision Date 09-Apr-2019

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the

date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**