



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 CO₂, 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

General advice	Get medical advice/attention if you feel unwell.
Eye contact	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.
Skin contact	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.
Inhalation	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.
Ingestion	IF SWALLOWED: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.
Self-protection of the first aider	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

Symptoms	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

Note to physicians	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

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	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 ³ (vacated) TWA: 750 ppm (vacated) TWA: 1800 mg/m ³ (vacated) STEL: 2400 mg/m ³ 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 ³
DIPHENYLMETHANEDIISOCYANATE 101-68-8	TWA: 0.005 ppm	(vacated) Ceiling: 0.02 ppm regulated under Methylene bisphenyl isocyanate (vacated) Ceiling: 0.2 mg/m ³ regulated under Methylene bisphenyl isocyanate Ceiling: 0.02 ppm Ceiling: 0.2 mg/m ³	IDLH: 75 mg/m ³ Ceiling: 0.020 ppm 10 min Ceiling: 0.2 mg/m ³ 10 min TWA: 0.005 ppm TWA: 0.05 mg/m ³
ETHANOL	STEL: 1000 ppm	TWA: 1000 ppm	IDLH: 3300 ppm

64-17-5		TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³
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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

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
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	
<u>Other Information</u>		
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 ³ (Rat) 8 h
DIPHENYLMETHANEDIISOCYANATE 101-68-8	= 31600 mg/kg (Rat) = 9200 mg/kg (Rat)	-	= 369 mg/m ³ (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

<u>NFPA</u>	Health hazards 2	Flammability 2	Instability 0	-
<u>HMIS</u>	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