



# SAFETY DATA SHEET

Revision Date 24-Apr-2015

Version 1

## 1. IDENTIFICATION

### Product identifier

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

### Other means of identification

**Product Code** 85420

**Synonyms** None

### 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  
10 Columbus Blvd.  
Hartford, CT 06106 USA

#### Distributor

ITW Permatex Canada  
35 Brownridge Road, Unit 1  
Halton Hills, ON Canada L7G 0C6  
Telephone: (800) 924-6994

**Company Phone Number** 1-87-Permatex  
(877) 376-2839

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

**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 2 |
| 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**

**Danger**

Causes serious eye irritation  
May cause allergy or asthma symptoms or breathing difficulties if inhaled  
May cause an allergic skin reaction  
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  
Wash face, hands and any exposed skin thoroughly after handling  
In case of inadequate ventilation wear respiratory protection  
Contaminated work clothing should not be allowed out of the workplace  
Do not breathe dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Keep away from heat/sparks/open flames/hot surfaces. — No smoking  
Keep container tightly closed  
Ground/bond container and receiving equipment  
Use explosion-proof electrical/ventilating/lighting/equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge  
Keep cool  
Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention  
Specific treatment (see supplemental first aid instructions on this label)  
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 skin irritation or rash occurs: Get medical advice/attention  
Wash contaminated clothing before reuse  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

**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

55.848% of the mixture consists of ingredient(s) of unknown toxicity

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### substance(s)

| Chemical Name               | CAS No     | Weight-% | Trade Secret |
|-----------------------------|------------|----------|--------------|
| ACETONE                     | 67-64-1    | 30 - 60  | *            |
| POLYESTER RESIN             | 9010-89-3  | 15 - 40  | *            |
| MODIFIED SILICON DIOXIDE    | 68611-44-9 | 5 - 10   | *            |
| DIPHENYLMETHANEDIISOCYANATE | 101-68-8   | 1 - 5    | *            |

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 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. Wash with soap and water. 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 symptoms persist, call a physician.                                                                                                        |
| <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> | Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.                                                                                                                                                      |

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

**Symptoms** See section 2 for more information.

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

**Note to physicians** Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

#### Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>), Dry chemical, Foam

#### Unsuitable extinguishing media

None.

#### Specific hazards arising from the chemical

Extremely flammable. Keep product and empty container away from heat and sources of ignition.

#### Explosion data

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Avoid contact with skin, eyes or clothing. Use in well ventilated area. Use personal protective equipment as required. Remove all sources of ignition.

### Environmental precautions

**Environmental precautions** Do not flush into surface water or sanitary sewer system. 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.

**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 away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

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

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Guidelines

| Chemical Name      | ACGIH TLV                     | OSHA PEL                                                                                                                                                                                                                                                                                             | NIOSH IDLH                                                   |
|--------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| ACETONE<br>67-64-1 | STEL: 750 ppm<br>TWA: 500 ppm | TWA: 1000 ppm<br>TWA: 2400 mg/m <sup>3</sup><br>(vacated) TWA: 750 ppm<br>(vacated) TWA: 1800 mg/m <sup>3</sup><br>(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<br>(vacated) STEL: 1000 ppm | IDLH: 2500 ppm<br>TWA: 250 ppm<br>TWA: 590 mg/m <sup>3</sup> |

|                                         |                |                                                                                                                                                                                                                                          |                                                                                                                                                   |
|-----------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| DIPHENYLMETHANEDIISOCYANATE<br>101-68-8 | TWA: 0.005 ppm | (vacated) Ceiling: 0.02 ppm<br>regulated under Methylene<br>bisphenyl isocyanate<br>(vacated) Ceiling: 0.2 mg/m <sup>3</sup><br>regulated under Methylene<br>bisphenyl isocyanate<br>Ceiling: 0.02 ppm<br>Ceiling: 0.2 mg/m <sup>3</sup> | IDLH: 75 mg/m <sup>3</sup><br>Ceiling: 0.020 ppm 10 min<br>Ceiling: 0.2 mg/m <sup>3</sup> 10 min<br>TWA: 0.005 ppm<br>TWA: 0.05 mg/m <sup>3</sup> |
|-----------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|

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 gloves and protective clothing.

**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

### 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                 | Not determined           |                         |
| Vapor density                  | >1                       | Air = 1                 |
| Relative density               | 1.04                     |                         |
| Water solubility               | Partially soluble        |                         |
| Solubility in other solvents   | 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

**Other Information**

**Softening point** No information available  
**Molecular weight** No information available  
**VOC Content (%)** <1%  
**Density** No information available  
**Bulk density** No information available

**10. STABILITY AND REACTIVITY**

**Reactivity**

No data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Conditions to avoid**

Heat, flames and sparks.

**Incompatible materials**

Strong oxidizing agents, Bases, Reducing agent, Amines

**Hazardous Decomposition Products**

Carbon oxides  
 Nitrogen oxides (NOx)  
 Isocyanates

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

**Inhalation** May be harmful if inhaled. May cause sensitization by inhalation.  
**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<br>67-64-1                      | = 5800 mg/kg ( Rat )                       | -           | = 50100 mg/m <sup>3</sup> ( Rat ) 8 h |
| DIPHENYLMETHANEDIISOCYANATE<br>101-68-8 | = 31600 mg/kg ( Rat ) = 9200 mg/kg ( Rat ) | -           | = 369 mg/m <sup>3</sup> ( 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 |
|---------------|-------|------|-----|------|
|---------------|-------|------|-----|------|

|                                             |   |         |   |   |
|---------------------------------------------|---|---------|---|---|
| DIPHENYLMETHANEDIISO<br>CYANATE<br>101-68-8 | - | Group 3 | - | - |
|---------------------------------------------|---|---------|---|---|

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) 6252 mg/kg

ATEmix (dermal) 293922 mg/kg

ATEmix (inhalation-dust/mist) 10.7 mg/l

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

59.3055% of the mixture consists of components(s) of unknown hazards to the aquatic environment

| Chemical Name      | Algae/aquatic plants | Fish                                                                                                                                            | Crustacea                                                                                      |
|--------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| ACETONE<br>67-64-1 | -                    | 4.74 - 6.33: 96 h Oncorhynchus mykiss mL/L LC50 6210 - 8120: 96 h Pimephales promelas mg/L LC50 static 8300: 96 h Lepomis macrochirus mg/L LC50 | 10294 - 17704: 48 h Daphnia magna mg/L EC50 Static 12600 - 12700: 48 h Daphnia magna mg/L EC50 |

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Mobility**

No information available.

| Chemical Name      | Partition coefficient |
|--------------------|-----------------------|
| ACETONE<br>67-64-1 | -0.24                 |

**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

| Chemical Name      | RCRA | RCRA - Basis for Listing          | RCRA - D Series Wastes | RCRA - U Series Wastes |
|--------------------|------|-----------------------------------|------------------------|------------------------|
| ACETONE<br>67-64-1 | -    | Included in waste stream:<br>F039 | -                      | U002                   |

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<br>67-64-1 | 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/NDL Complies  
EINECS/ELINCS Not Listed.  
ENCS Not Listed.  
IECSC Complies  
KECL Complies  
PICCS Complies  
AICS Complies

##### Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
DSL/NDL - 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             | Yes |
| 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<br>67-64-1                          | 5000 lb                  | -              | RQ 5000 lb final RQ<br>RQ 2270 kg final RQ |
| DIPHENYLMETHANEDIISOCYANA<br>TE<br>101-68-8 | 5000 lb                  | -              | RQ 5000 lb final RQ<br>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<br>Developmental |

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

| Chemical Name                                                            | New Jersey | Massachusetts | Pennsylvania |
|--------------------------------------------------------------------------|------------|---------------|--------------|
| ACETONE<br>67-64-1                                                       | X          | X             | X            |
| DIPHENYLMETHANE<br>DIISOCYANATE [ISOMERS AND<br>HOMOLOGUES]<br>9016-87-9 | X          | -             | -            |
| DIPHENYLMETHANEDIISOCYANA<br>TE<br>101-68-8                              | X          | X             | X            |
| ETHANOL<br>64-17-5                                                       | X          | X             | X            |
| -DIPHENYLMETHANE-4,4<br>-DI-ISOCYANATE ~<br>2536-05-2                    | X          | -             | -            |

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

|             |                         |                       |                           |                              |
|-------------|-------------------------|-----------------------|---------------------------|------------------------------|
| <b>NFPA</b> | <b>Health hazards</b> 2 | <b>Flammability</b> 3 | <b>Instability</b> 0      | -                            |
| <b>HMIS</b> | <b>Health hazards</b> 2 | <b>Flammability</b> 3 | <b>Physical hazards</b> 0 | <b>Personal protection</b> B |

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

Revision Date 24-Apr-2015

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**Disclaimer**

The information provided in this Material 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**