SAFETY DATA SHEET

Revision Date 03-May-2019
Version 8

1. IDENTIFICATION

Product identifier
Product Name 51D PIPE JOINT COMPOUND 16.2 FL.OZ

Other means of identification
Product Code 80045

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

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)

| Skin sensitization | Category 1 |
| Flammable liquids  | Category 3 |

Label elements

Emergency Overview

Signal word
Warning

May cause an allergic skin reaction
Flammable liquid and vapor
Precautionary Statements - Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves
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

Precautionary Statements - Response
Specific treatment (see supplemental first aid instructions on this label)
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
In case of fire: Use CO2, dry chemical, or foam to extinguish.

Precautionary Statements - Storage
Store in a well-ventilated place. Keep cool

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 2.0155 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROSIN</td>
<td>8050-09-7</td>
<td>10 - 30</td>
</tr>
<tr>
<td>ETHANOL</td>
<td>64-17-5</td>
<td>7 - 13</td>
</tr>
<tr>
<td>2-PROPANOL</td>
<td>67-63-0</td>
<td>1 - 5</td>
</tr>
<tr>
<td>METHANOL</td>
<td>67-56-1</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>METHYL ISOBUTYL KETONE</td>
<td>108-10-1</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

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
Skin contact

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.

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.

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

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 (CO2), Dry chemical, Foam

Unsuitable extinguishing media

None

Specific hazards arising from the chemical

Flammable. Risk of ignition. Vapors may form explosive mixtures with air.

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

Ensure adequate ventilation, especially in confined areas. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges.

Environmental precautions

Environmental precautions

Do not flush into surface water or sanitary sewer system.

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 containers tightly closed in a cool, well-ventilated place.

Incompatible materials
Strong oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHANOL 64-17-5</td>
<td>STEL: 1000 ppm TWA: 200 ppm</td>
<td>TWA: 1000 ppm TWA: 1900 mg/m³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m³</td>
<td>IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m³</td>
</tr>
<tr>
<td>2-PROPANOL 67-63-0</td>
<td>STEL: 400 ppm TWA: 200 ppm</td>
<td>TWA: 400 ppm TWA: 980 mg/m³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m³ (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m³</td>
<td>IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m³ STEL: 500 ppm STEL: 1225 mg/m³</td>
</tr>
<tr>
<td>METHANOL 67-56-1</td>
<td>STEL: 250 ppm TWA: 200 ppm S*</td>
<td>TWA: 200 ppm TWA: 260 mg/m³ (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m³ (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m³ (vacated) S*</td>
<td>IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m³ STEL: 250 ppm STEL: 325 mg/m³</td>
</tr>
<tr>
<td>METHYL ISOBUTYL KETONE 108-10-1</td>
<td>STEL: 75 ppm TWA: 20 ppm</td>
<td>TWA: 100 ppm TWA: 410 mg/m³ (vacated) TWA: 50 ppm (vacated) TWA: 205 mg/m³ (vacated) STEL: 75 ppm (vacated) STEL: 300 mg/m³</td>
<td>IDLH: 500 ppm TWA: 50 ppm TWA: 205 mg/m³ STEL: 75 ppm STEL: 300 mg/m³</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks · Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Paste</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Alcohol</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>82 °C / 180 °F</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>25 °C / 77 °F</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>&lt; 1</td>
<td>Butyl acetate = 1</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit:</td>
<td>12.7%</td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit:</td>
<td>2.3%</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>33 mm Hg @ 68°F</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>&gt;1</td>
<td>Air = 1</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.25-1.32</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>Partially soluble</td>
<td></td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Other Information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Softening point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Molecular weight</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>VOC Content (%)</td>
<td>14.2%</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Bulk density</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>SADT (self-accelerating decomposition temperature)</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>

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

Hazardous Decomposition Products
Carbon oxides
Aldehydes
Carboxylic acids

### 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

**Inhalation**
May cause irritation of respiratory tract.

**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**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROSIN 8050-09-7</td>
<td>7600 mg/kg (Rat) = 3000 mg/kg (Rat)</td>
<td>&gt; 2500 mg/kg (Rabbit)</td>
<td>1.5 mg/L (Rat) 4h</td>
</tr>
<tr>
<td>ETHANOL 64-17-5</td>
<td>7060 mg/kg (Rat)</td>
<td>-</td>
<td>124.7 mg/L (Rat) 4h</td>
</tr>
<tr>
<td>2-PROPANOL 67-63-0</td>
<td>5050 mg/kg</td>
<td>12800 mg/kg</td>
<td>72600 mg/m³ (Rat) 4h</td>
</tr>
<tr>
<td>METHANOL 67-56-1</td>
<td>6200 mg/kg (Rat)</td>
<td>15800 mg/kg (Rabbit) = 15840 mg/kg (Rabbit)</td>
<td>64000 ppm (Rat) 4h = 22500 ppm (Rat) 8h</td>
</tr>
<tr>
<td>METHYL ISOBUTYL KETONE 108-10-1</td>
<td>2080 mg/kg (Rat)</td>
<td>3000 mg/kg (Rabbit)</td>
<td>2000 - 4000 ppm (Rat) 4h</td>
</tr>
</tbody>
</table>

#### 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.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHANOL 64-17-5</td>
<td>A3</td>
<td>Group 1</td>
<td>Known</td>
<td>X</td>
</tr>
<tr>
<td>METHYL ISOBUTYL KETONE 108-10-1</td>
<td>A3</td>
<td>Group 2B</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

**ACGIH (American Conference of Governmental Industrial Hygienists)**
A2 - Suspected Human Carcinogen  
A3 - Animal Carcinogen

**IARC (International Agency for Research on Cancer)**
Group 1 - Carcinogenic to Humans  
Group 2B - Possibly 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

**Chronic toxicity**
May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects. Contains a known or suspected reproductive toxin.

**Target Organ Effects**
Blood, Central nervous system, Central Vascular System (CVS), Eyes, Liver, Reproductive System, Respiratory system, Skin, Thyroid.

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

**ATEmix (oral)**
11916 mg/kg
ATEmix (dermal) 9640 mg/kg
ATEmix (inhalation-dust/mist) 78.3 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity
2.6355 % 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.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHANOL 64-17-5</td>
<td>-0.32</td>
</tr>
<tr>
<td>2-PROPANOL 67-63-0</td>
<td>0.05</td>
</tr>
<tr>
<td>METHANOL 67-56-1</td>
<td>-0.77</td>
</tr>
<tr>
<td>METHYL ISOBUTYL KETONE 108-10-1</td>
<td>1.19</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHANOL 64-17-5</td>
<td>Toxic Ignitable</td>
</tr>
<tr>
<td>2-PROPANOL 67-63-0</td>
<td>Toxic Ignitable</td>
</tr>
<tr>
<td>METHANOL 67-56-1</td>
<td>Toxic Ignitable</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT
UN/ID No 1866
Proper shipping name: Resin, solution, flammable, Limited Quantity (LQ)
Hazard Class 3
Packing Group III
Emergency Response Guide Number

IATA
UN/ID No: ID8000
Proper shipping name: Consumer commodity
Hazard Class: 9
ERG Code: 9L

IMDG
UN/ID No: 1866
Proper shipping name: Resin, solution, flammable, Limited Quantity (LQ)
Hazard Class: 3
Packing Group: III
EmS-No: F-E, S-E

15. REGULATORY INFORMATION

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

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-PROPANOL - 67-63-0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

Acute health hazard
Chronic Health Hazard
Fire hazard
Sudden release of pressure hazard
Reactive Hazard

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)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
</table>
US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHANOL - 64-17-5</td>
<td>Carcinogen</td>
</tr>
<tr>
<td>METHANOL - 67-56-1</td>
<td>Developmental</td>
</tr>
<tr>
<td>TITANIUM DIOXIDE - 13463-67-7</td>
<td>*Carcinogen (airborne, unbound particles of respirable size)</td>
</tr>
<tr>
<td>CARBON BLACK - 1333-86-4</td>
<td>*Carcinogen (airborne, unbound particles of respirable size)</td>
</tr>
<tr>
<td>SILICA, QUARTZ - 14808-60-7</td>
<td>*Carcinogen (airborne particles of respirable size only)</td>
</tr>
<tr>
<td>METHYL ISOBUTYL KETONE - 108-10-1</td>
<td>Carcinogen</td>
</tr>
<tr>
<td></td>
<td>Developmental</td>
</tr>
</tbody>
</table>

* The asterisked chemical(s) listed are not subject to Proposition 65 because they are not airborne in the finished product
* Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage
* Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAOLIN 1332-58-7</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>ETHANOL 64-17-5</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>TALC 14807-96-6</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2-PROPANOL 67-63-0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>METHANOL 67-56-1</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>TITANIUM DIOXIDE 13463-67-7</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>CARBON BLACK 1333-86-4</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>SILICA, QUARTZ 14808-60-7</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>METHYL ISOBUTYL KETONE 108-10-1</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

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

NFPA Health hazards 2 Flammability 3 Instability 0 -
HMIS Health hazards 2 Flammability 3 Physical hazards 0 Personal protection B

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

Revision Date 03-May-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