TOPAZ

# Safety Data Sheet

## SECTION 1: IDENTIFICATION

**Product Name:** Permacrete 10-66 Powder, 10-66RP Asphalt Rapid Patch

**Product Number:** 10-66, 10-66RP

**Recommended Use:** Polyester Mortar Mix. Industrial

**Manufacturer:** Topaz Industries
130 Corporate Drive, Holtsville, NY 11742
Phone: 631-207-0700

**Emergency number:** Chemtrec
800.424.9300

## SECTION 2: HAZARDS IDENTIFICATION

**Classification:** Flammable.

**OSHA Regulatory Status:** Carcinogenicity Category 1A
Specific Target Organ Toxicity (Repeated Exposure) Category 1

**Label Elements:** Health Hazard

**Pictograms:**

**Signal Word:** Danger

**Hazard Statements:** Heat or contamination may cause hazardous decomposition. Causes eye irritation. May cause cancer by inhalation. Causes damage to lungs through prolonged or repeated exposure by inhalation. If exposed or concerned get medical advice. May cause allergic skin reaction. Possible risk of impaired fertility. Very toxic to aquatic organisms: may cause long term adverse effects in the aquatic environment. Peroxides and peroxide decomposition products are flammable and can ignite with explosive force if confined. Dispose of contents / containers in accordance with local regulations.

**Precautionary Statements:** Skin contact, eye contact and inhalation are the primary routes of exposure to this product. Dust may be irritating to the respiratory tract and cause symptoms of bronchitis. May cause sensitization by skin contact. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Do not eat, drink, or smoke when using this product. Wear protective gloves and safety goggles. In case of inadequate ventilation, wear respiratory protection.

**Unknown Acute Toxicity:** No additional information

**Classification System:**

**NFPA Ratings (scale 0-4)**


Health = 0
Fire = 0
Reactivity = 0

**HMIS Ratings (scale 0-4)**


Health = * (See Sections 2,8,11 of this SDS)
Flammability = 0
Physical Hazard = 0
Personal Protection = E (See Section 8 of this SDS)

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**SUBSTANCE**

| NAME | PRODUCT IDENTIFIER | % | GHS-US CLASSIFICATION |
|---|---|---|---|
| Crystalline Silica (quartz) | CAS No. 14808-60-7 | 80-99 | Carcinogen |
| Benzoyl Peroxide | CAS No. 00094-36-0 | .5-1.5 | Flammable |
| Dicyclohexyl Phthalate | CAS No. 00084-61-7 | .5-1.5 | Hazardous |

## SECTION 4: FIRST AID MEASURES

**DESCRIPTION OF FIRST AID MEASURES**

**General Advice:** Dust may be irritating to the respiratory tract. Irritating to eyes. May cause sensitization by skin contact. Possible risk of impaired fertility. In cases of doubt or when symptoms persist, seek medical attention.

**Eye Contact:** May cause eye irritation. Immediately flush eyes with soap and water. If easy to do, contact lenses should be removed during the flushing, but trained personnel. Hold the eyelids apart during the flushing to ensure rinsing the entire surface of the eye and lids with water. Do not rub eyes. If irritation persists, seek medical attention.

**Skin Contact:** Generally first aid is not required, however may cause allergic skin reaction. May cause sensitization by skin contact.

**Inhalation:** Dust may be irritating to the respiratory tract and cause symptoms of bronchitis. If irritation develops from breathing dust, move the person to fresh air. If not breathing give artificial respiration. Oxygen may additionally be given, by trained personnel, if it is available. Seek medical attention if needed.

**Ingestion:** Call a physician or a poison control center. Induce vomiting only if directed by medical personnel. The patient should lie on their left side if vomiting to reduce risk of aspiration. Never give anything by mouth to an unconscious or convulsing person.

**Important Effects:** Particulates may cause abrasive eye injury. Inhalation of dust may cause respiratory tract irritation. Symptoms of exposure may include cough, sore throat, nasal congestion, sneezing, wheezing and shortness of breath. Prolonged inhalation of respirable crystalline silica above certain concentrations may cause lung diseases, including silicosis and lung cancer.

**Indication of Immediate Medical Attention and Special Treatment, if necessary:**

Persons with pre-existing skin, respiratory, and/or central nervous system disease may be at increased risk if exposed to this material. Aspiration of this product during induced emesis can result in lung injury. If evacuation of stomach contents is considered necessary, use method least likely to cause aspiration, such as gastric lavage after endotracheal intubation. Contact a Poison Control Center for additional treatment information. Treat patient symptomatically.

## SECTION 5: FIRE FIGHTING MEASURES

**EXTINGUISHING MEDIA**

**Suitable Extinguishing Media**: Waterspray, foam, sand, dry chemical powder, CO2.

Un**suitable Extinguishing Media**: Halons

**Protective Equipment:** Firefighters must wear fire resistant protective equipment. Wear approved respirator and protective gloves.

**Other Information:** Evacuate all non-essential personnel. Extinguish a small fire with powder or carbon dioxide, then apply water to prevent re-ignition. Cool closed containers with water. Water used to extinguish a fire should not be allowed to enter the drainage system or water courses. After a ire ventilate thoroughly the area and soak with water. Clean the walls and metallic surfaces.

**Fire and Explosion Hazard**: CAUTION: Re-ignition may occur. Decomposition under effect of heating (See also Section Hazardous decomposition products). If involved in a fire, it will support combustion. Dust explosion hazard. In case of fire and/or explosion do not breathe fumes.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

**Personal Precautions**:
- Wear appropriate protective clothing and respiratory protection.(See Section 8). Avoid generating airborne dust during clean-up.
- Do not breath dust.
- Avoid contact with skin.
- Avoid contact with eyes.
- See Section 8 for personal protection guidelines.

### ENVIRONMENTAL PRECAUTIONS

Do not allow to enter drains or water courses. Report releases to regulatory authorities if required by local, state and federal regulations.

### METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

**Containment Methods**
- Avoid dry sweeping. Do not use compressed air to clean spilled sand or ground silica. Use water spraying/flushing or ventilated or HEPA filtered vacuum cleaning system, or wet before sweeping. Avoid dust generation. Dispose of in closed containers.

## SECTION 7: HANDLING AND STORAGE

### PRECAUTIONS FOR SAFE HANDLING

**Handling**:
- Avoid generating dust. Do not breathe dust. Do not rely on your sight to determine if dust is in the air. Respirable crystalline silica dust may be in the air without a visible dust cloud Use adequate exhaust ventilation and dust collection to reduce respirable crystalline silica dust levels to below the permissible exposure limit (PEL). Maintain and test ventilation and dust collection equipment. Use all available work practices to control dust exposures, such as water sprays. Practice good housekeeping. Do not permit dust to collect on walls, floors, sills, ledges, machinery or equipment. Keep airborne dust concentrations below permissible exposure limits.
- Where necessary to reduce exposures below the PEL or other applicable limit, wear a respirator approved for silica containing dust when using, handling, storing or disposing of this product or bag. See Section 8, for further information on respirators. Do not alter the respirator. Do not wear a tight fitting respirator with facial hair such as a beard or mustache that prevents a good face to face piece seal between the respirator and face. Maintain, clean and fit test respirators in accordance with applicable standards. Wash and vacuum clothing that has become dusty.
- Participate in training, exposure monitoring and health surveillance programs to monitor any potential adverse health effects that may be caused by breathing respirable crystalline silica. The OSHA Hazard Communication Standard, 29 CFR Sections 1910.1200, 1915.1200, 1917.28, 1918.90, 1926.59 and 1928.21, and state and local worker or community “right-to-know” laws and regulations should be strictly followed.

**Other Precautions**: Wear protective equipment avoid contact with skin, eyes and clothing. Do not breathe dust. Handle in well-ventilated areas. Eliminate all sources of ignition. Do not generate flames or sparks. Keep away from reducing agents, acids, alkalines and heave metal compounds (eg: accelerators, driers, metal soaps). Keep product and emptied container away from heat and sources of ignition. Confinement must be avoided. Avoid contact with skin and eyes.

### CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

**Storage**: Store in accordance with local/national regulations. Keep away from food, drink and animal feeding stuffs. Store in a dry well ventilated place away from sources of heat and direct sunlight. Store separate from other chemicals. Keep only in the original container.

**Other Information**: It is recommended to use electrical equipment of temperature group T3. However, auto-ignition can never be excluded. Wash hands thoroughly after handling or contact. Keep work clothes separate and do not take them home.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### EXPOSURE GUIDELINES

| Chemical Name | ACGIH TLVs | OSHA PELs | NOISH RELs |
|---|---|---|---|
| Crystalline Silica (Quartz)<br>14808-60-7 | 0.025 mg/m$^3$ TWA<br>(respirable dust)<br>30 mg/m$^3$ %$SiO_2$ + 2 TWA<br>(total dust) | 10 mg/m$^3$ %$SiO_2$ + 2 TWA<br>(respirable dust) | 0.05 mg/m3 TWA<br>(respirable dust) |
| Benzoyl Peroxide<br>CAS No. 00094-36-0 | 5 mg/m$^3$ | 5 mg/m$^3$ | 5 mg/m$^3$ |
| Dicyclohexyl Phthalate<br>CAS No. 00084-61-7 | 5 mg/m$^3$ | 5 mg/m$^3$ | 5 mg/m$^3$ |

If crystalline silica (quartz) is heated to more than 870˚C, quartz can change to a form of crystalline silica known as tridymite; if crystalline silica (quartz) is heated to more than 1470˚C, quartz can change to a form of crystalline silica known as cristobalite. The OSHA PEL for crystalline silica as tridymite or cristobalite is one-half of the OSHA PEL for crystalline silica (quartz).

**Appropriate engineering controls:** Use adequate general and local exhaust ventilation to maintain concentrations in the workplace below the applicable exposure limits listed above.

**Pictograms:**

**Respiratory:** Provide adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment. Use the table below to assist you i selecting respirators that will reduce personal exposures to below the OSHA PEL.

| Assigned Protection Factor [1] | Type of Respirator (Use only NIOSH-certified respirators) |
|---|---|
| 10 | Any air-purifying elastomeric half-mask respirator equipped with appropriate type of particulate filter.[2]<br>Appropriate filtering facepiece respirator. [2,3]<br>Any air-purifying full facepiece respirator equipped with appropriate type of particulate filter. [2,3]<br>Any negative pressure (demand) supplied-air respirator equipped with a half mask. |
| 25 | Any powered air-purifying respirator equipped with a hood or helmet and a high efficiency (HEPA) filter.<br>Any continuous flow supplied-air respirator equipped with a hood or helmet. |
| 50 | Any air-purifying full facepiece respirator equipped with N-100, R-100, or P-100 filter(s).<br>Any powered air-purifying respirator equipped with a tight-fitting facepiece (half or full facepiece) and and a high-efficiency filter.<br>Any negative pressure (demand) supplied-air respirator equipped with a full facepiece.<br>Any continuous flow supplied-air respirator equipped with a tight-fitting facepiece (half or full facepiece).<br>Any negative pressure (demand) self-contained respirator equipped with a full facepiece. |
| 1,000 | Pressure-demand supplied-air respirator equipped with a half-mask. |

1. The protection offered by a given respirator is contingent upon (1) the respirator user adhering to complete program requirements (such as the ones required by OSHA in 29CFR1910.134), (2) the use of NOISH-certified respirators in their approved configuration, and (3) individual fit testing to rule out those respirators that cannot achieve a good fit on individual workers.

2. Appropriate means that the filter medium will provide protection against the particulate in question.
3. An APF of 10 can only be achieved if the respirator is qualitatively or quantitatively fit tested on individual workers.

**Skin Protection:** Maintain good industrial hygiene. Protection recommended for workers suffering from dermatitis or sensitive skin.

**Eye Protection:** Safety Glasses with side shields or goggles recommended if eye contact is anticipated.

**Hand Protection:** Wear suitable protective gloves of neoprene or synthetic rubber.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| **Physical State** | Powder |
| **Color/Appearance** | White or Colored |
| **Odor** | Faint |
| **Boiling Point/Range** | N/A |
| **Melting Point/Freezing Point** | Decomposes prior to melting |
| **Flash Point** | N/A |
| **Flammability** | Decomposition products may be flammable |
| **Explosive Properties** | No |
| **Oxidizing Properties** | N/A |
| **Vapor Pressure** | N/A |
| **Density** | 1230 kg/m$^3$ (20˚C / 68˚F) Specific gravity = 1.23 (20˚C / 68˚F) |
| **Bulk Density** | 640 kg/m$^3$ (20˚C / 68˚F) |
| **Solubility in Water** | Insoluble (20˚C / 68˚F) |
| **Solubility in Other Solvents** | Not Determined |
| **pH Value** | Not Determined |
| **Partition Coefficient n-octanol/water** | Not Determined |
| **Relative Vapor Density (air=1)** | N/A |
| **Viscosity** | N/A |
| **Active Oxygen Content** | 3.3% |
| **Peroxide Content** | 49-51% |
| **Autoignition Temperature** | Test Method Not Applicable (See Section 7) |
| **SADT** | 55˚C (See also Section 10) |
| **Upper/Lower Flammability or Explosive Limits** | Not Determined |
| **Volatile %** | Not Determined |

## SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** No data available. Stable under normal conditions

**Chemical Stability:** Stable. SADT (Self accelerating decomposition temperature) is the lowest temperature at which self accelerating decomposition may occur with a substance in the packaging as used in transport. A dangerous self accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by thermal decomposition at and above the following temperature: 55˚ C.

**Possibility of Hazardous Reactions:** Contact with powerful oxidizing agents such as fluorine, chlorine trifluoride, oxygen difluoride and hydrofluoric acid may cause fires. Polymerization does not occur.

**Conditions to Avoid:** Avoid generation of dust in handling and use. To maintain quality, store in original closed container below 25˚ C. Avoid shock and friction. Confinement must be avoided. Do not allow to dry out. Explosive when dry.

**Incompatible Materials:** Powerful oxidizers such as fluorine, chlorine trifluoride, oxygen difluoride and hydrofluoric acid. Avoid contact with rust, iron and copper. Contact with incompatible materials such as acid, alkalies, heavy metals and reducing agents will result in hazardous decomposition. Do not mix with peroxide accelerators. Use only stainless steel 316, PP, polyethylene or glass-lined equipment.

**Hazardous Decomposition Products:** Silica will dissolve in hydrofluoric acid and produce a corrosive gas, silicon tetrafluoride. Other hazardous decomposition products: benzoic acid, benzene.

**Other Information:** Emergency procedures will vary depending on conditions. The customer should have an emergency response plan in place.

## SECTION 11: TOXICOLOGICAL INFORMATION

**ACUTE EFFECTS OF EXPOSURE TO SILICA:**

**Inhalation:** Inhalation of dust may cause respiratory tract irritation. Symptoms of exposure may include cough, sore throat, nasal congestion, sneezing, wheezing and shortness of breath.

**Ingestion:** Ingestion is an unlikely route of exposure. If dust is swallowed, it may irritate the mouth and throat.

**Skin Contact:** No adverse effects are expected

**Eye Contact:** Particulates may cause abrasive injury.

**Chronic Effects:** Prolonged inhalation of respirable crystalline silica may cause lung disease, silicosis, lung cancer and other effects as indicated below.

**SILICOSIS -** Silicosis can exist in several forms, chronic (or ordinary), accelerated or acute:

Chronic (or Ordinary) Silicosis is the most common form of silicosis and can occur after many years (10-20 or more) of prolonged, repeated inhalation of relatively low levels or airborne crystalline silica dust. It is further defined as either simple or complicated silicosis. Simple silicosis is characterized by lung lesions less than 1 centimeter in diameter. Often, simple silicosis is not associated with symptoms, detectable changes in lung function or disability. Simple silicosis may be progressive and may develop into complicated silicosis or progressive massive fibrosis (PMF) Complicated silicosis or PMFis characterized by lung lesions greater than 1 centimeter in diameter. PMF symptoms, if present, are shortness of breath and cough. Complicated silicosis may be associated with decreased lung function and may be disabling. Advanced complicated silicosis may lead to death. Advanced complicated silicosis can result in heart disease secondary to the lung disease.

Accelerated Silicosis can occur with prolonged repeated inhalation of high concentrations of crystalline silica over a relatively short period; the lung lesions can appear within five (5) years of initial exposure. Progression can be rapid. Accelerated silicosis is similar to chronic or ordinary silicosis, except that lung lesions appear earlier and progression is more rapid.

Acute Silicosis can occur after the repeated inhalation of very high concentrations of respirable crystalline silica over a short period of time, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough, weakness and weight loss. Acute silicosis is fatal.

**CANCER -** IARC, the International Agency for Research on Cancer concluded that “crystalline silica in the form of quartz or cristobalite dust is carcinogenic to humans. NTP classifies crystalline silica as known to be a human carcinogen.

**AUTO-IMMUNE DISEASES -** Several studies have reported excess cases of several auto-immune disorders - scleroderma, systemic lupus erythematosus, rheumatoid arthritis - among silica-exposed workers.

**TUBERCULOSIS -** Individuals with silicosis are at increased risk to develop pulmonary tuberculosis if exposed to tuberculosis bacteria.

**KIDNEY DISEASE -** Studies have reported excess cases of kidney diseases among silica exposed workers.

**NON-MALIGNANT RESPIRATORY DISEASES -** See the NOISH Special Hazard Review for information concerning the association between exposure to crystalline silica and chronic bronchitis, emphysema and small airway disease.

**Numerical Measures of Toxicity:**

Crystalline Silica (Quartz): LD50 oral rat > 22,500 mg/kg.

**ACUTE EFFECTS OF EXPOSURE TO DICYCLOHEXYL PHTHALATE:**

| | |
|---|---|
| **Oral Toxicity:** | LD50 oral rat >2000 mg/kg. |
| **Dermal:** | LD50 rat >2000 mg/kg |
| **Germ Cell Mutagenicity:** | Not mutagenic in vitro. |
| **Skin** | Non Irritating. |
| **Eye:** | Non Irritating. |
| **Sensitization:** | Sensitizing. |
| **Genotoxicity:** | No Evidence. |
| **Carconogenicity:** | Negative. |
| **Chronic Toxicity:** | Subchronic (90 days) oral toxicity. No observed adverse effect levels. |

**ACUTE EFFECTS OF EXPOSURE TO DIBENZOYL PEROXIDE:**

| | |
|---|---|
| **Oral Toxicity:** | LD50 oral rat >5000 mg/kg. |
| **Inhalation** | LC50 rat >24300 mg/m$^3$ dust |
| **Germ Cell Mutagenicity:** | Not mutagenic. |
| **Skin** | Minimally Irritating. |
| **Eye:** | Irritating. |
| **Sensitization:** | Sensitizing. |
| **Genotoxicity:** | No Evidence. |
| **Carconogenicity:** | Negative. |
| **Chronic Toxicity:** | No observed adverse effect levels. |

## SECTION 12: ECOLOGICAL INFORMATION

**CRYSTALLINE SILICA (QUARTZ)**

**Eco-Toxicity:** Crystalline Silica (Quartz) Is Not Known To Be Ecotoxic.

**Persistence and Degradability:** Crystalline Silica (Quartz) Is Not Degradable.

**Bioaccumulation:** Crystalline Silica (Quartz) Is Not Bioaccumulative.

**Mobility In Soil:** Crystalline Silica (Quartz) Is Not Mobile In Soil.

**Other Adverse Effects:** No Data Available.

**DICYCLOHEXYL PHTHALATE and DIBENZOYL PEROXIDE**

**Degradability:** Biodegradable.

**Other Adverse Effects:** May cause long-term adverse effects in the aquatic environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Methods** Discard any product, residue, disposable container or liner if full compliance with local, state and federal regulations.

## SECTION 14: TRANSPORTATION INFORMATION

**DOT**

| | |
|---|---|
| **UN-No** | None |
| **Proper shipping name** | Not Regulated |
| **Hazard Class** | None |
| **Packing Group** | None |
| **Environmental Hazards** | None |

## SECTION 15: REGULATORY INFORMATION

**CRYSTALLINE SILICA**

**UNITED STATES (FEDERAL AND STATE)**

| | |
|---|---|
| **TSCA** | Crystalline Silica (Quartz) appears on the EPA TSCA inventory under CAS No. 14808-60-7. |
| **RCRA** | Not classified as a hazardous waste |
| **CERCLA** | Not classified as a hazardous waste |
| **SARA TITLE III** | Not classified as a hazardous waste |
| **CLEAN AIR ACT** | Does not contain any Class I or Class II Ozone depleting substances. |
| **FDA** | Silica is included in the list of substances that may be included in coatings used in food contact surfaces. |
| **CA. PROP 65** | Silica is classified as a substances known to the state of California to ce a carcinogen. |

## SECTION 16: OTHER INFORMATION

**This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not constitute a guarantee for any specific property of this product. No warranty is expressed or implied regarding the accuracy of this data or the result obtained from the use thereof. Our company assumes no responsibility for personal injury or property damage to the vendee, users or third parties caused by the material. Such vendees or users assume all risks associated with the use of this material.**