1. Identification

Product identifier: Permagile PG-2089 Hardener

Other means of identification

SKU#: RT927H

Recommended use: Not available.

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name: ITW Performance Polymers
Address: 130 Commerce Drive
Montgomeryville, PA 18936
United States

Telephone: Customer Service 215-855-8450
Website: www.itwperformancepolymers.com
E-mail: Not available.
Contact person: EHS Department

Emergency phone number

CHEMTREC 800-424-9300
International 703-527-3887

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards

Acute toxicity, dermal: Category 4
Skin corrosion/irritation: Category 1
Serious eye damage/eye irritation: Category 1
Sensitization, skin: Category 1

Environmental hazards

Hazardous to the aquatic environment, long-term hazard: Category 3

OSHA defined hazards: Not classified.

Label elements

Signal word: Danger

Hazard statement: Harmful in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention: Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response: If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Storage: Store locked up.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC): None known.
3. Composition/information on ingredients

### Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline SiO2 (Quartz)</td>
<td></td>
<td>14808-60-7</td>
<td>60 - 100</td>
</tr>
<tr>
<td>Amidoamine</td>
<td></td>
<td>Trade Secret</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Attapulgite</td>
<td></td>
<td>12174-11-7</td>
<td>2.5 - 10</td>
</tr>
<tr>
<td>Silicon Dioxide</td>
<td></td>
<td>112945-52-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td></td>
<td>13463-67-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

Other components below reportable levels

<table>
<thead>
<tr>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 - 10</td>
</tr>
</tbody>
</table>

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

**Inhalation**
Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact**
Remove contaminated clothing immediately and wash skin with soap and water. Chemical burns must be treated by a physician. Get medical advice/attention if you feel unwell. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

**Eye contact**
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

**Ingestion**
Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

**Most important symptoms/effects, acute and delayed**
Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

**Indication of immediate medical attention and special treatment needed**
Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General information**
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

**Suitable extinguishing media**
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

**Unsuitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**
During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions**
Move containers from fire area if you can do so without risk.

**Specific methods**
Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards**
No unusual fire or explosion hazards noted.

6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Do not get in eyes, on skin, or on clothing. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL 0.05 mg/m³ Respirable dust. Crystalline SiO₂ (Quartz) (CAS 14808-60-7)</td>
<td>PEL</td>
<td>0.05 mg/m³</td>
<td>Respirable dust.</td>
</tr>
<tr>
<td>PEL 15 mg/m³ Total dust. Titanium Dioxide (CAS 13463-67-7)</td>
<td>PEL</td>
<td>15 mg/m³</td>
<td>Total dust.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. OSHA Table Z-3 (29 CFR 1910.1000)</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA 0.1 mg/m³ Respirable fraction. Crystalline SiO₂ (Quartz) (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.1 mg/m³</td>
<td>Respirable.</td>
</tr>
<tr>
<td>2.4 mppcf Respirable. Silicon Dioxide (CAS 112945-52-5)</td>
<td>TWA</td>
<td>0.8 mg/m³</td>
<td>Respirable.</td>
</tr>
<tr>
<td>20 mppcf</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA 5 mg/m³ Respirable fraction. Titanium Dioxide (CAS 13463-67-7)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>15 mg/m³ Total dust.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 mppcf Total dust.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 mppcf Respirable fraction.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. ACGIH Threshold Limit Values</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA 0.025 mg/m³ Respirable fraction. Crystalline SiO₂ (Quartz) (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.025 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>TWA 10 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. NIOSH: Pocket Guide to Chemical Hazards</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA 0.05 mg/m³ Respirable dust. Crystalline SiO₂ (Quartz) (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.05 mg/m³</td>
<td>Respirable dust.</td>
</tr>
<tr>
<td>TWA 6 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Occupational Exposure Limits are not relevant to the current physical form of the product.
Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield. Face shield is recommended.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Paste.

Physical state

Not available.

Form

Paste.

Color

Cement Gray (when resin and hardener are mixed)

Odor

Ammoniacal.

Odor threshold

Not available.

pH

Alkaline

Melting point/freezing point

Not available.

Initial boiling point and boiling range

392 °F (200 °C) estimated

Flash point

212.0 °F (100.0 °C) estimated

Evaporation rate

Not available.

Flammability (solid, gas)

Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)

Not available.

Flammability limit - upper (%)

Not available.

Explosive limit - lower (%)

Not available.

Explosive limit - upper (%)

Not available.

Vapor pressure

4.8 hPa estimated

Vapor density

Not available.

Relative density

Not available.

Solubility(ies)

Solubility (water)

Not available.

Partition coefficient (n-octanol/water)

Not available.

Auto-ignition temperature

Not available.

Decomposition temperature

Not available.

Viscosity

Not available.

Other information

Density

1.75 g/cm3

Explosive properties

Not explosive.

Flammability class

Combustible IIIB estimated
**Oxidizing properties**
Not oxidizing.

**Specific gravity**
1.75

10. Stability and reactivity

**Reactivity**
The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability**
Material is stable under normal conditions.

**Possibility of hazardous reactions**
Hazardous polymerization does not occur.

**Conditions to avoid**
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

**Incompatible materials**
Strong oxidizing agents.

**Hazardous decomposition products**
No hazardous decomposition products are known.

11. Toxicological information

**Information on likely routes of exposure**

- **Inhalation**
  May cause irritation to the respiratory system.

- **Skin contact**
  Causes severe skin burns. Harmful in contact with skin. May cause an allergic skin reaction.

- **Eye contact**
  Causes serious eye damage.

- **Ingestion**
  Causes digestive tract burns.

**Symptoms related to the physical, chemical and toxicological characteristics**
Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

**Information on toxicological effects**

**Acute toxicity**
Harmful in contact with skin.

**Components**

<table>
<thead>
<tr>
<th>Silicon Dioxide (CAS 112945-52-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute</strong></td>
</tr>
<tr>
<td>Oral</td>
</tr>
<tr>
<td>LD50</td>
</tr>
<tr>
<td>Rat</td>
</tr>
<tr>
<td>Test Results</td>
</tr>
<tr>
<td>&gt; 22500 mg/kg</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**
Causes severe skin burns and eye damage.

**Serious eye damage/eye irritation**
Causes serious eye damage.

**Respiratory or skin sensitization**

- **Respiratory sensitization**
  Not a respiratory sensitizer.

- **Skin sensitization**
  May cause an allergic skin reaction.

- **Germ cell mutagenicity**
  No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity**
Not classifiable as to carcinogenicity to humans.

**IARC Monographs. Overall Evaluation of Carcinogenicity**
- **Attapulgite (CAS 12174-11-7)**
  2B Possibly carcinogenic to humans.
- **Crystalline SiO2 (Quartz) (CAS 14808-60-7)**
  3 Not classifiable as to carcinogenicity to humans.
- **Silicon Dioxide (CAS 112945-52-5)**
  1 Carcinogenic to humans.
- **Titanium Dioxide (CAS 13463-67-7)**
  2B Possibly carcinogenic to humans.

- **Crystalline SiO2 (Quartz) (CAS 14808-60-7)**
  Cancer

**US. National Toxicology Program (NTP) Report on Carcinogens**
- **Crystalline SiO2 (Quartz) (CAS 14808-60-7)**
  Known To Be Human Carcinogen.

**Reproductive toxicity**
This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure**
Not classified.

**Specific target organ toxicity - repeated exposure**
Not classified.

**Aspiration hazard**
Not an aspiration hazard.
12. Ecological information

**Ecotoxicity**  Harmful to aquatic life with long lasting effects.

**Persistence and degradability**  No data is available on the degradability of any ingredients in the mixture.

**Bioaccumulative potential**  No data available.

**Mobility in soil**  No data available.

**Other adverse effects**  No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

**Disposal instructions**  Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations**  Dispose in accordance with all applicable regulations.

**Hazardous waste code**  D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]  The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products**  Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging**  Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

**DOT**

| UN number  | UN1760 |
| UN proper shipping name | Corrosive liquids, n.o.s. (Amidoamine) |

| Transport hazard class(es) | Class | 8 |
| Subsidiary risk | - |
| Label(s) | 8 |

| Packing group | III |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Special provisions | IB3, T7, TP1, TP28 |
| Packaging exceptions | 154 |
| Packaging non bulk | 203 |
| Packaging bulk | 241 |

**IATA**

| UN number  | UN1760 |
| UN proper shipping name | Corrosive liquid, n.o.s. (Amidoamine) |

| Transport hazard class(es) | Class | 8 |
| Subsidiary risk | - |
| Packing group | III |
| Environmental hazards | No. |
| ERG Code | 8L |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Other information | Passenger and cargo aircraft Allowed with restrictions. |
| Cargo aircraft only Allowed with restrictions. |

**IMDG**

| UN number  | UN1760 |
| UN proper shipping name | CORROSIVE LIQUID, N.O.S. (Amidoamine) |

| Transport hazard class(es) | Class | 8 |
| Subsidiary risk | - |
| Packing group | III |
15. Regulatory information

**US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

- **TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**
  - Not regulated.
- **CERCLA Hazardous Substance List (40 CFR 302.4)**
  - Not listed.
- **SARA 304 Emergency release notification**
  - Not regulated.
  - Crystalline SiO2 (Quartz) (CAS 14808-60-7)
    - Cancer
    - lung effects
    - immune system effects
    - kidney effects

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

- **SARA 302 Extremely hazardous substance**
  - Not listed.
- **SARA 311/312 Hazardous chemical**
  - Yes
  - **Classified hazard categories**
    - Acute toxicity (any route of exposure)
    - Skin corrosion or irritation
    - Serious eye damage or eye irritation
    - Respiratory or skin sensitization
- **SARA 313 (TRI reporting)**
  - Not regulated.

**Other federal regulations**

- **Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**
  - Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.
Safe Drinking Water Act (SDWA)
US state regulations
California Proposition 65
WARNING: This product can expose you to chemicals including Crystalline SiO2 (Quartz): Crystalline SiO2 (Quartz), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.
California Proposition 65 - CRT: Listed date/Carcinogenic substance
- Attapulgite (CAS 12174-11-7) Listed: December 28, 1999
- Crystalline SiO2 (Quartz) (CAS 14808-60-7) Listed: October 1, 1988
- Titanium Dioxide (CAS 13463-67-7) Listed: September 2, 2011

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))
- Attapulgite (CAS 12174-11-7)
- Crystalline SiO2 (Quartz) (CAS 14808-60-7)
- Titanium Dioxide (CAS 13463-67-7)

16. Other information, including date of preparation or last revision
Issue date: 06-27-2013
Revision date: 09-06-2018
Version #: 03

HMIS® ratings
Health: 3
Flammability: 1
Physical hazard: 0
Personal protection: X

NFPA ratings
Health: 3
Flammability: 1
Instability: 0

Disclaimer
ITW Performance Polymers cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief as of the date of its publication. 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. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.
This document has undergone significant changes and should be reviewed in its entirety.