This is a kit that contains the following components:
TAMMSPATCH II GRY POWDER 'A' 45# BG, TAMMSPATCH II GRAY POWDER 'A'
TAMMSPATCH II LIQUID
SAFETY DATA SHEET

1. Identification

Product identifier: TAMMSPATCH II GRY POWDER 'A' 45# BG, TAMMSPATCH II GRAY POWDER 'A'
Product Code: TR5112745501

Recommended use and restriction on use

Recommended use: Cement, Portland, chemicals
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information
EUCLID CHEMICAL COMPANY
19218 REDWOOD ROAD
CLEVELAND OH 44110
US

Contact person: EH&S Department
Telephone: 216-531-9222
Emergency telephone number: 1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Health Hazards
- Skin Corrosion/Irritation: Category 2
- Serious Eye Damage/Eye Irritation: Category 1
- Skin sensitizer: Category 1
- Carcinogenicity: Category 1A
- Specific Target Organ Toxicity - Single Exposure: Category 3
- Specific Target Organ Toxicity - Repeated Exposure: Category 1

Target Organs
1. Respiratory tract irritation.
2. Lung

Unknown toxicity - Health
- Acute toxicity, oral: 99.17 %
- Acute toxicity, dermal: 99.9 %
- Acute toxicity, inhalation, vapor: 100 %
- Acute toxicity, inhalation, dust or mist: 31.99 %

Label Elements

Hazard Symbol:

0000000011754
Signal Word: Danger

Hazard Statement:
- Causes skin irritation.
- Causes serious eye damage.
- May cause an allergic skin reaction.
- May cause cancer.
- May cause respiratory irritation.
- Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements

Prevention:
Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing should not be allowed out of the workplace. 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. Do not eat, drink or smoke when using this product.

Response:
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. IF ON SKIN: Wash with plenty of water/… If skin irritation or rash occurs: Get medical advice/attention. Immediately call a POISON CENTER/doctor. Specific treatment (see on this label). Wash contaminated clothing before reuse.

Storage:
Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal:
Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC):
None.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>CAS number</th>
<th>Content in percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica (Quartz)/Silica Sand</td>
<td>14808-60-7</td>
<td>50 - &lt;100%</td>
</tr>
<tr>
<td>Portland cement</td>
<td>65997-15-1</td>
<td>20 - &lt;50%</td>
</tr>
</tbody>
</table>
Titanium dioxide  13463-67-7  0.1 - <1%  
* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

**Description of necessary first-aid measures**

**Inhalation:**  Move to fresh air.

**Skin Contact:**  Get medical attention. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.

**Eye contact:**  Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately.

**Ingestion:**  Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

**Personal Protection for First-aid Responders:**  Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Most important symptoms/effects, acute and delayed**

**Symptoms:**  Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping. Extreme irritation of eyes and mucous membranes, including burning and tearing. Respiratory tract irritation.

**Hazards:**  No data available.

**Indication of immediate medical attention and special treatment needed**

**Treatment:**  Symptoms may be delayed.

5. Fire-fighting measures

**General Fire Hazards:**  No unusual fire or explosion hazards noted.

**Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media:**  Use fire-extinguishing media appropriate for surrounding materials.

**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**

**Special fire fighting procedures:**  No data available.
Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

Accidental release measures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Methods and material for containment and cleaning up: Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Environmental Precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Handling

Technical measures (e.g. Local and general ventilation): Mechanical ventilation or local exhaust ventilation may be required. Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of dust.

Safe handling advice: Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Do not get in eyes. Wash hands thoroughly after handling. Avoid contact with skin. Avoid contact with eyes, skin, and clothing. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Use mechanical ventilation in case of handling which causes formation of dust.

Contact avoidance measures: No data available.

Hygiene measures: Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Do not get in eyes. Wash contaminated clothing before reuse. Avoid contact with skin. Contaminated work clothing should not be allowed out of the workplace.

Storage

Safe storage conditions: Store locked up.

Safe packaging materials: No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Type</th>
<th>Exposure Limit Values</th>
<th>Source</th>
</tr>
</thead>
</table>

000000011754
<table>
<thead>
<tr>
<th>Substance</th>
<th>Unit</th>
<th>Value</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica (Quartz) / Silica Sand - Respirable fraction.</td>
<td>TWA</td>
<td>0.025 mg/m³</td>
<td>US. ACGIH Threshold Limit Values, as amended (2011)</td>
</tr>
<tr>
<td>Crystalline Silica (Quartz) / Silica Sand - Respirable dust.</td>
<td>TWA</td>
<td>0.05 mg/m³</td>
<td>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended (03 2016)</td>
</tr>
<tr>
<td></td>
<td>OSHA_AC</td>
<td>0.025 mg/m³</td>
<td>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended (03 2016)</td>
</tr>
<tr>
<td>Crystalline Silica (Quartz) / Silica Sand - Respirable dust.</td>
<td>PEL</td>
<td>0.05 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (03 2016)</td>
</tr>
<tr>
<td>Crystalline Silica (Quartz) / Silica Sand - Respirable.</td>
<td>TWA</td>
<td>2.4 millions of particles per cubic foot of air</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (2000)</td>
</tr>
<tr>
<td>Portland cement - Respirable fraction.</td>
<td>TWA</td>
<td>0.1 mg/m³</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (2000)</td>
</tr>
<tr>
<td>Portland cement - Total dust.</td>
<td>PEL</td>
<td>15 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)</td>
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<tr>
<td>Portland cement - Respirable fraction.</td>
<td>PEL</td>
<td>5 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)</td>
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<tr>
<td>Portland cement</td>
<td>TWA</td>
<td>50 millions of particles per cubic foot of air</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (2000)</td>
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<tr>
<td>Titanium dioxide - Respirable fraction.</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>US. ACGIH Threshold Limit Values, as amended (2011)</td>
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<tr>
<td>Titanium dioxide - Total dust.</td>
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<td>TWA</td>
<td>0.10 mg/m³</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)</td>
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<td>Crystalline Silica (Quartz)/Silica Sand - Respirable dust.</td>
<td>TWA</td>
<td>0.1 mg/m³</td>
<td>Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)</td>
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<td>Portland cement - Total dust.</td>
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<td>TWA</td>
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<td>Titanium dioxide - Respirable fraction.</td>
<td>TWA</td>
<td>3 mg/m³</td>
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<tr>
<td>Titanium dioxide - Respirable fraction.</td>
<td>TWA</td>
<td>3 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
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<tr>
<td>Titanium dioxide</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)</td>
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<td>Titanium dioxide - Total dust.</td>
<td>TWA</td>
<td>10 mg/m³</td>
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</tr>
<tr>
<td>Aluminum oxide - Respirable.</td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
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<td>Aluminum oxide - Total dust.</td>
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<td>Aluminum oxide - Respirable fraction.</td>
<td>TWA</td>
<td>1 mg/m³</td>
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<td>Aluminum oxide - Inhalable fraction.</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)</td>
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<td>TWA</td>
<td>3 mg/m³</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)</td>
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<tr>
<td>Aluminum oxide - Total dust. - as Al</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)</td>
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<tr>
<td>Amorphous silica - Total</td>
<td>TWA</td>
<td>4 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
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</tbody>
</table>
### Amorphous silica - Respirable.

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>1.5 mg/m³</td>
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</tbody>
</table>

- **Canada. British Columbia OELs.** (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)

### Amorphous silica - Respirable dust.

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Limit</th>
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</thead>
<tbody>
<tr>
<td>TWA</td>
<td>6 mg/m³</td>
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</table>

- **Canada. Quebec OELs.** (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)

### Zirconium dioxide - as Zr

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEL</td>
<td>10 mg/m³</td>
</tr>
</tbody>
</table>

- **Canada. British Columbia OELs.** (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>5 mg/m³</td>
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- **Canada. British Columbia OELs.** (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)

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<tr>
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</thead>
<tbody>
<tr>
<td>STEL</td>
<td>10 mg/m³</td>
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</table>

- **Canada. Quebec OELs.** (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)

### Iron oxide - Total dust.

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>10 mg/m³</td>
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</tbody>
</table>

- **Canada. British Columbia OELs.** (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)

### Iron oxide - Dust. - as Fe

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>5 mg/m³</td>
</tr>
</tbody>
</table>

- **Canada. British Columbia OELs.** (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)

### Iron oxide - Fume. - as Fe

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEL</td>
<td>10 mg/m³</td>
</tr>
</tbody>
</table>

- **Canada. British Columbia OELs.** (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)

### Iron oxide - Respirable fraction.

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>3 mg/m³</td>
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</table>

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### Iron oxide - Fume. - as Fe

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### Iron oxide - Total dust.

<table>
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<tr>
<th>Exposure</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>10 mg/m³</td>
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- **Canada. Quebec OELs.** (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)

### Iron oxide - Dust and fume. - as Fe

<table>
<thead>
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<th>Exposure</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>5 mg/m³</td>
</tr>
</tbody>
</table>

- **Canada. Quebec OELs.** (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)

### Appropriate Engineering Controls

Mechanical ventilation or local exhaust ventilation may be required. Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of dust.
Individual protection measures, such as personal protective equipment

**General information:** Provide easy access to water supply and eye wash facilities. 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/face protection:** Wear a full-face respirator, if needed. Wear safety glasses with side shields (or goggles) and a face shield.

**Skin Protection**

**Hand Protection:** Use suitable protective gloves if risk of skin contact.

**Other:** Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

**Respiratory Protection:** In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

**Hygiene measures:** Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Do not get in eyes. Wash contaminated clothing before reuse. Avoid contact with skin. Contaminated work clothing should not be allowed out of the workplace.

---

### 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state:</td>
</tr>
<tr>
<td>Form:</td>
</tr>
<tr>
<td>Color:</td>
</tr>
<tr>
<td>Odor:</td>
</tr>
<tr>
<td>Odor threshold:</td>
</tr>
<tr>
<td>pH:</td>
</tr>
<tr>
<td>Melting point/freezing point:</td>
</tr>
<tr>
<td>Initial boiling point and boiling range:</td>
</tr>
<tr>
<td>Flash Point:</td>
</tr>
<tr>
<td>Evaporation rate:</td>
</tr>
<tr>
<td>Flammability (solid, gas):</td>
</tr>
</tbody>
</table>

#### Upper/lower limit on flammability or explosive limits

| Flammability limit - upper (%) | No data available. |
| Flammability limit - lower (%) | No data available. |
| Explosive limit - upper        | No data available. |
| Explosive limit - lower        | No data available. |
| Vapor pressure:                | No data available. |
| Vapor density:                 | No data available. |
| Relative density:              | 2.6 |
Solubility(ies)

Solubility in water: Miscible with water.
Solubility (other): No data available.
Partition coefficient (n-octanol/water): No data available.
Auto-ignition temperature: No data available.
Decomposition temperature: No data available.
Viscosity: No data available.

10. Stability and reactivity

Reactivity: No data available.
Chemical Stability: Material is stable under normal conditions.
Possibility of hazardous reactions: No data available.
Conditions to avoid: Avoid heat or contamination.
Incompatible Materials: No data available.
Hazardous Decomposition Products: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Inhalation: In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact: Causes skin irritation. May cause an allergic skin reaction.
Eye contact: Causes serious eye damage.
Ingestion: May be ingested by accident. Ingestion may cause irritation and malaise.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation: No data available.
Skin Contact: No data available.
Eye contact: No data available.
Ingestion: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral Product: Not classified for acute toxicity based on available data.
Specified substance(s):
Titanium dioxide
LD 50 (Rat): > 5,000 mg/kg

Dermal
Product: Not classified for acute toxicity based on available data.

Inhalation
Product: Not classified for acute toxicity based on available data.

Specified substance(s):
Crystalline Silica
(Quartz)/ Silica Sand
LC 50: > 5.0 mg/l
Titanium dioxide
LC 50 (Rat): 3.43 mg/l

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Specified substance(s):
Titanium dioxide in vivo (Rabbit): Not irritant

Serious Eye Damage/Eye Irritation
Product: No data available.

Specified substance(s):
Titanium dioxide Rabbit, 24 hrs: Not irritating

Respiratory or Skin Sensitization
Product: No data available.

Carcinogenicity
Product: No data available.
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Crystalline Silica (Quartz)/ Silica Sand
Overall evaluation: Carcinogenic to humans.

Titanium dioxide
Overall evaluation: Possibly carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:

Crystalline Silica (Quartz)/ Silica Sand
Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:

Crystalline Silica (Quartz)/ Silica Sand
Cancer

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Target Organs
Specific Target Organ Toxicity - Single Exposure: Respiratory tract irritation.
Specific Target Organ Toxicity - Repeated Exposure: Lung

Aspiration Hazard
Product: No data available.

Other effects: No data available.
12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Specified substance(s):
Titanium dioxide
EC 50 (Water flea (Daphnia magna), 48 h): > 1,000 mg/l Intoxication

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.

Bioaccumulative potential
Bioconcentration Factor (BCF)
Product: No data available.

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Mobility in soil:
No data available.

Other adverse effects:
No data available.
13. Disposal considerations

Disposal methods: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:
   Not Regulated

CFR / DOT:
   Not Regulated

IMDG:
   Not Regulated

15. Regulatory information

US Federal Regulations
   TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
   None present or none present in regulated quantities.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)
   None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>OSHA hazard(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica</td>
<td>kidney effects</td>
</tr>
<tr>
<td>(Quartz)/ Silica Sand</td>
<td>lung effects</td>
</tr>
<tr>
<td></td>
<td>immune system effects</td>
</tr>
<tr>
<td></td>
<td>Cancer</td>
</tr>
</tbody>
</table>

CERCLA Hazardous Substance List (40 CFR 302.4):
   None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
   Immediate (Acute) Health Hazards
   Delayed (Chronic) Health Hazard
   Skin Corrosion or Irritation
Serious eye damage or eye irritation
Respiratory or Skin Sensitization
Carcinogenicity
Specific target organ toxicity (single or repeated exposure)

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification
None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical
<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Threshold Planning Quantity</th>
</tr>
</thead>
</table>

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
WARNING
Cancer - www.P65Warnings.ca.gov

US. New Jersey Worker and Community Right-to-Know Act
<table>
<thead>
<tr>
<th>Chemical Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica (Quartz)/ Silica Sand</td>
</tr>
<tr>
<td>Portland cement</td>
</tr>
</tbody>
</table>

US. Massachusetts RTK - Substance List
<table>
<thead>
<tr>
<th>Chemical Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica (Quartz)/ Silica Sand</td>
</tr>
<tr>
<td>Portland cement</td>
</tr>
</tbody>
</table>

US. Pennsylvania RTK - Hazardous Substances
<table>
<thead>
<tr>
<th>Chemical Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica (Quartz)/ Silica Sand</td>
</tr>
<tr>
<td>Portland cement</td>
</tr>
</tbody>
</table>

US. Rhode Island RTK
<table>
<thead>
<tr>
<th>Chemical Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica (Quartz)/ Silica Sand</td>
</tr>
<tr>
<td>Portland cement</td>
</tr>
</tbody>
</table>

International regulations
Montreal protocol
Not applicable

Stockholm convention
Not applicable

Rotterdam convention
Not applicable

Kyoto protocol
Not applicable

VOC:
Regulatory VOC (less water and exempt solvent) : 0 g/l
VOC Method 310 : 0.00 %
Inventory Status:

Australia AICS: One or more components in this product are not listed on or exempt from the Inventory.

Canada DSL Inventory List: All components in this product are listed on or exempt from the Inventory.

EINECS, ELINCS or NLP: One or more components in this product are not listed on or exempt from the Inventory.

Japan (ENCS) List: One or more components in this product are not listed on or exempt from the Inventory.

China Inv. Existing Chemical Substances: One or more components in this product are not listed on or exempt from the Inventory.

Korea Existing Chemicals Inv. (KECI): One or more components in this product are not listed on or exempt from the Inventory.

Canada NDSL Inventory: One or more components in this product are not listed on or exempt from the Inventory.

Philippines PICCS: One or more components in this product are not listed on or exempt from the Inventory.

US TSCA Inventory: All components in this product are listed on or exempt from the Inventory.

New Zealand Inventory of Chemicals: One or more components in this product are not listed on or exempt from the Inventory.

Japan ISHL Listing: One or more components in this product are not listed on or exempt from the Inventory.

Japan Pharmacopoeia Listing: One or more components in this product are not listed on or exempt from the Inventory.

Mexico INSQ: One or more components in this product are not listed on or exempt from the Inventory.

Ontario Inventory: One or more components in this product are not listed on or exempt from the Inventory.

Taiwan Chemical Substance Inventory: One or more components in this product are not listed on or exempt from the Inventory.

16. Other information, including date of preparation or last revision

000000011754
Revision Date: 07/08/2020
Version #: 3.0
Further Information: No data available.
Disclaimer: For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.
SAFETY DATA SHEET

1. Identification

Product identifier: TAMMSPATCH II LIQUID
Product Code: TR5112745501

Recommended use and restriction on use
   Recommended use: Coatings
   Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information
EUCLID CHEMICAL COMPANY
19218 REDWOOD ROAD
CLEVELAND OH 44110
US

Contact person: EH&S Department
Telephone: 216-531-9222
Emergency telephone number: 1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification
   Not classified

Label Elements

   Hazard Symbol: No symbol
   Signal Word: No signal word.
   Hazard Statement: Not applicable
   Precautionary Statements: Not applicable

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>CAS number</th>
<th>Content in percent (%)</th>
</tr>
</thead>
</table>
4. First-aid measures

Description of necessary first-aid measures

Inhalation: Move to fresh air.

Skin Contact: Wash skin thoroughly with soap and water. If skin irritation occurs: Get medical advice/attention.

Eye contact: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/attention.

Ingestion: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

Personal Protection for First-aid Responders: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Most important symptoms/effects, acute and delayed

Symptoms: May cause skin and eye irritation.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: Get medical attention if symptoms occur.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

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

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

No data available.

Accidental release measures:

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Methods and material for containment and cleaning up:

Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Environmental Precautions:

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water sources or sewer. Environmental manager must be informed of all major spillages.

7. Handling and storage

Handling

Technical measures (e.g. Local and general ventilation):

Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

Safe handling advice:

Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Contact avoidance measures:

No data available.

Hygiene measures:

Observe good industrial hygiene practices.

Storage

Safe storage conditions:

Store away from incompatible materials. Store in original tightly closed container.

Safe packaging materials:

No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Type</th>
<th>Exposure Limit Values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium hydroxide</td>
<td>STEL</td>
<td>35 ppm</td>
<td>US. ACGIH Threshold Limit Values, as amended (2011)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>25 ppm</td>
<td>US. ACGIH Threshold Limit Values, as amended (2011)</td>
</tr>
<tr>
<td></td>
<td>PEL</td>
<td>50 ppm 35 mg/m3</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)</td>
</tr>
</tbody>
</table>

None of the components have assigned exposure limits.
### Chemical name | Type | Exposure Limit Values | Source
--- | --- | --- | ---
Ammonium hydroxide | STEL | 35 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
| TWA | 25 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Ammonium hydroxide | TWA | 25 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
| STEL | 35 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Formaldehyde | TWA | 0.3 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
| CEILING | 1 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Formaldehyde | STEL | 1 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
| CEV | 1.5 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Formaldehyde | CEILING | 2 ppm 3 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)

### Appropriate Engineering Controls
Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

### Individual protection measures, such as personal protective equipment

**General information:** Use personal protective equipment as required.

**Eye/face protection:** Wear goggles/face shield.

**Skin Protection**

**Hand Protection:** Use suitable protective gloves if risk of skin contact.

**Other:** No data available.

**Respiratory Protection:** In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

**Hygiene measures:** Observe good industrial hygiene practices.

### 9. Physical and chemical properties

**Appearance**

**Physical state:** liquid
**Form:** liquid
**Color:** White

000000011754
Odor: Mild
Odor threshold: No data available.
pH: 9.0 - 10.0
Melting point/freezing point: -0.00 °C 32 °F
Initial boiling point and boiling range: > 100 °C > 212 °F
Flash Point: No data available.
Evaporation rate: Slower than Ether
Flammability (solid, gas): No

Upper/lower limit on flammability or explosive limits
- Flammability limit - upper (%): No data available.
- Flammability limit - lower (%): No data available.
- Explosive limit - upper: No data available.
- Explosive limit - lower: No data available.

Vapor pressure: 17 mmHg (20 °C 68 °F)
Vapor density: Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density: 1.1

Solubility(ies)
- Solubility in water: Soluble
- Solubility (other): No data available.

Partition coefficient (n-octanol/water): No data available.
Auto-ignition temperature: No data available.
Decomposition temperature: No data available.
Viscosity: No data available.

10. Stability and reactivity
Reactivity: No data available.
Chemical Stability: Material is stable under normal conditions.
Possibility of hazardous reactions: No data available.
Conditions to avoid: Avoid heat or contamination.
Hazardous Decomposition Products: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information
Information on likely routes of exposure
Inhalation: In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact: Causes mild skin irritation.
Eye contact: Eye contact is possible and should be avoided.
Ingestion: May be ingested by accident. Ingestion may cause irritation and malaise.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation: No data available.
Skin Contact: No data available.
Eye contact: No data available.
Ingestion: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: Not classified for acute toxicity based on available data.
Specified substance(s):
Ammonium hydroxide LD 50 (Rat): 350 mg/kg

Dermal
Product: Not classified for acute toxicity based on available data.

Inhalation
Product: Not classified for acute toxicity based on available data.

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Serious Eye Damage/Eye Irritation
Product: No data available.

Respiratory or Skin Sensitization
Product: No data available.

Carcinogenicity
Product: No data available.
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Chronic hazards to the aquatic environment:
Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.

Bioaccumulative potential
Bioconcentration Factor (BCF)
Product: No data available.

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Mobility in soil: No data available.

Other adverse effects: No data available.

13. Disposal considerations

Disposal methods: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:
Not Regulated

CFR / DOT:
Not Regulated

IMDG:
Not Regulated

15. Regulatory information

US Federal Regulations
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs)
(40 CFR 721, Subpt E)
None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>OSHA hazard(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>Acute toxicity</td>
</tr>
<tr>
<td></td>
<td>Skin irritation</td>
</tr>
<tr>
<td></td>
<td>Skin sensitization</td>
</tr>
<tr>
<td></td>
<td>Flammability</td>
</tr>
<tr>
<td></td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td></td>
<td>Respiratory sensitization</td>
</tr>
<tr>
<td></td>
<td>Cancer</td>
</tr>
<tr>
<td></td>
<td>Eye irritation</td>
</tr>
</tbody>
</table>

CERCLA Hazardous Substance List (40 CFR 302.4):

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Reportable quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium hydroxide</td>
<td>1000 lbs.</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>100 lbs.</td>
</tr>
</tbody>
</table>

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Not classified
Not classified

SARA 302 Extremely Hazardous Substance

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Reportable quantity</th>
<th>Threshold Planning Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>100 lbs.</td>
<td>500 lbs.</td>
</tr>
</tbody>
</table>

SARA 304 Emergency Release Notification
None present or none present in regulated quantities.
SARA 311/312 Hazardous Chemical

Chemical Identity  Threshold Planning Quantity
Formaldehyde  500lbs

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Chemical Identity  Reportable quantity
Formaldehyde  lbs

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65  WARNING
Cancer - www.P65Warnings.ca.gov

US. New Jersey Worker and Community Right-to-Know Act
No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List
Chemical Identity
Formaldehyde

US. Pennsylvania RTK - Hazardous Substances
No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.

International regulations

Montreal protocol
Not applicable

Stockholm convention
Not applicable

Rotterdam convention
Not applicable

Kyoto protocol
Not applicable

VOC: When appropriately mixed with the other part, product has a VOC less water and exempt solvent of:
< 5 g/l
Regulatory VOC (less water and exempt solvent) : 13 g/l
VOC Method 310 : 0.00 %

Inventory Status:
Australia AICS: One or more components in this product are not listed on or exempt from the Inventory.
Canada DSL Inventory List: All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP: One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List: One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances: One or more components in this product are not listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI): One or more components in this product are not listed on or exempt from the Inventory.
Canada NDSL Inventory: One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS: One or more components in this product are not listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals: One or more components in this product are not listed on or exempt from the Inventory.
Japan ISHL Listing: One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing: One or more components in this product are not listed on or exempt from the Inventory.
US TSCA Inventory: All components in this product are listed on or exempt from the Inventory.

16. Other information, including date of preparation or last revision

Revision Date: 07/08/2020
Version #: 3.0
Further Information: No data available.

Disclaimer: For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.