SAFETY DATA SHEET

1. Identification

Material name: E3 DEEP POUR & XTREME PART C AGGREGATE
Material: 088DP 32

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 sensitizer Category 1
Carcinogenicity Category 1A
Specific Target Organ Toxicity - Repeated Exposure Category 1

Target Organs
1. Lung

Unknown toxicity - Health
Acute toxicity, oral 99.81 %
Acute toxicity, dermal 100 %
Acute toxicity, inhalation, vapor 100 %
Acute toxicity, inhalation, dust or mist 1.31 %

Label Elements

Hazard Symbol:
Signal Word: Danger

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

Precautionary Statements

Prevention: Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Response: IF ON SKIN: Wash with plenty of water/. . . If skin irritation or rash occurs: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention. Specific treatment (see on this label). Wash contaminated clothing before reuse.

Storage: Store locked up.

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>Aluminum oxide</td>
<td>1344-28-1</td>
<td>0.1 - &lt;1%</td>
</tr>
</tbody>
</table>

* 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: 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: Rinse immediately with plenty of water.
Ingestion: Rinse mouth thoroughly.

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: 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: 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): 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: 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. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling.

Contact avoidance measures: No data available.

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

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>
<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 T</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></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>Aluminum oxide - Respirable fraction.</td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>US. ACGIH Threshold Limit Values, as amended (2011)</td>
</tr>
<tr>
<td></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>
</tr>
<tr>
<td>Chemical name</td>
<td>Type</td>
<td>Exposure Limit Values</td>
<td>Source</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------</td>
<td>-----------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Aluminum oxide - 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>
</tr>
<tr>
<td></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 (03 2016)</td>
</tr>
<tr>
<td>Aluminum oxide - Respirable fraction.</td>
<td>TWA</td>
<td>15 millions of particles per cubic foot of air</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Type</th>
<th>Exposure Limit Values</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>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
</tr>
<tr>
<td>Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.</td>
<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>
</tr>
<tr>
<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 the Quality of the Work Environment), as amended (09 2017)</td>
</tr>
<tr>
<td>Trade Secret</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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<tr>
<td>Substance</td>
<td>Form</td>
<td>TWA/CWA</td>
<td>Concentration</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-----------------</td>
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<td>---------------</td>
</tr>
<tr>
<td>Aluminum oxide</td>
<td>Respirable</td>
<td>TWA</td>
<td>1 mg/m³</td>
</tr>
<tr>
<td>Aluminum oxide</td>
<td>Total dust</td>
<td>TWA</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Aluminum oxide</td>
<td>Respirable fraction</td>
<td>TWA</td>
<td>3 mg/m³</td>
</tr>
<tr>
<td>Aluminum oxide</td>
<td>Respirable fraction</td>
<td>TWA</td>
<td>1 mg/m³</td>
</tr>
<tr>
<td>Aluminum oxide</td>
<td>Inhalable fraction</td>
<td>TWA</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Aluminum oxide</td>
<td>Respirable fraction</td>
<td>TWA</td>
<td>3 mg/m³</td>
</tr>
<tr>
<td>Aluminum oxide</td>
<td>Total dust</td>
<td>TWA</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Iron oxide</td>
<td>Total dust</td>
<td>TWA</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Iron oxide</td>
<td>Dust. - as Fe</td>
<td>TWA</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>Iron oxide</td>
<td>Fume. - as Fe</td>
<td>STEL</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Iron oxide</td>
<td>Respirable fraction</td>
<td>TWA</td>
<td>3 mg/m³</td>
</tr>
<tr>
<td>Iron oxide</td>
<td>Fume. - as Fe</td>
<td>TWA</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>Iron oxide</td>
<td>Respirable fraction</td>
<td>TWA</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>Iron oxide</td>
<td>Total dust</td>
<td>TWA</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Iron oxide</td>
<td>Dust and fume. - as Fe</td>
<td>TWA</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>Total dust</td>
<td>TWA</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>Respirable fraction</td>
<td>TWA</td>
<td>3 mg/m³</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>Total dust</td>
<td>TWA</td>
<td>10 mg/m³</td>
</tr>
</tbody>
</table>
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: 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: 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. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

9. Physical and chemical properties

Appearance
Physical state: solid
Form: Powder
Color: Tan
Odor: Odorless
Odor threshold: No data available.
pH: No data available.
Melting point/freezing point: No data available.
Initial boiling point and boiling range: No data available.
Flash Point: No data available.
Evaporation rate: No data available.
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: 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.
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: May cause an allergic skin reaction.

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):

Dermal Product:

Inhalation Product:

Specified substance(s):

Repeated dose toxicity Product:

Skin Corrosion/Irritation Product:

Serious Eye Damage/Eye Irritation Product:

Respiratory or Skin Sensitization Product:

Carcinogenicity Product:

Aluminum oxide

LD 50 (Rat): > 10,000 mg/kg

Not classified for acute toxicity based on available data.

Crystalline Silica (Quartz)/ Silica Sand

LC 50: > 5.0 mg/l

Aluminum oxide

LC 50 (Rat): 7.6 mg/l

No data available.

No data available.

Aluminum oxide

in vivo (Rabbit): Not irritant

No data available.

Aluminum oxide

Rabbit, 24 hrs: Not irritating

No data available.

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

Crystalline Silica (Quartz)/ Silica Sand

Overall evaluation: Carcinogenic to humans.

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

Crystalline Silica (Quartz)/ Silica Sand

Known To Be Human Carcinogen.


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 - 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.

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)

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>OSHA hazard(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica (Quartz)/Silica Sand</td>
<td>kidney effects</td>
</tr>
<tr>
<td></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
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
Chemical Identity  Threshold Planning Quantity

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
Chemical Identity
Crystalline Silica (Quartz)/ Silica Sand

US. Massachusetts RTK - Substance List
Chemical Identity
Crystalline Silica (Quartz)/ Silica Sand

US. Pennsylvania RTK - Hazardous Substances
Chemical Identity
Crystalline Silica (Quartz)/ Silica Sand

US. Rhode Island RTK
Chemical Identity
Crystalline Silica (Quartz)/ Silica Sand

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:** All components in this product are 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:** All components in this product are 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:** All components in this product are listed on or exempt from the Inventory.
- **Korea Existing Chemicals Inv. (KECI):** All components in this product are 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:** All components in this product are 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:** All components in this product are 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.

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

**Revision Date:** 11/19/2019
**Version #:** 7.1
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.