SAFETY DATA SHEET

1. Identification

Material name: METAL FX - 1 GAL DOSAGE COPPER
Material: CMFX G001 188

Recommended use and restriction on use

Recommended use: Pigment
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 Statement: not applicable

Other hazards which do not result in GHS classification: 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>Mica</td>
<td>12001-26-2</td>
<td>60 - 100%</td>
</tr>
<tr>
<td>Iron oxide</td>
<td>1309-37-1</td>
<td>30 - 60%</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
Ingestion: Rinse mouth thoroughly.
Inhalation: Move to fresh air.
Skin Contact: Remove contaminated clothing and wash the skin thoroughly with soap and water after work.
Eye contact: Rinse immediately with plenty of water.

Most important symptoms/effects, acute and delayed
Symptoms: May cause skin and eye irritation.

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.

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

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable 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

Precautions for safe handling: Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. 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.

Conditions for safe storage, including any incompatibilities: Store away from incompatible materials. Store in original tightly closed container.

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>Mica - Respirable fraction.</td>
<td>TWA</td>
<td>3 mg/m3</td>
<td>US. ACGIH Threshold Limit Values (2011)</td>
</tr>
<tr>
<td>Mica</td>
<td>TWA</td>
<td>20 millions of particles per cubic foot of air</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)</td>
</tr>
<tr>
<td>Iron oxide - Respirable fraction.</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>US. ACGIH Threshold Limit Values (2011)</td>
</tr>
<tr>
<td>Iron oxide - Fume.</td>
<td>PEL</td>
<td>10 mg/m3</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
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<td>type</td>
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</tr>
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<td>----------------------------</td>
<td>----------</td>
<td>-----------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Mica - Respirable.</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>
</tr>
<tr>
<td>Mica - Respirable fraction.</td>
<td>TWAEV</td>
<td>3 mg/m3</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)</td>
</tr>
<tr>
<td>Mica - Respirable dust.</td>
<td>TWA</td>
<td>3 mg/m3</td>
<td>Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)</td>
</tr>
<tr>
<td>Iron oxide - Total dust.</td>
<td>TWA</td>
<td>10 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>Iron oxide - Dust. - as Fe</td>
<td>TWA</td>
<td>5 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>Iron oxide - Fume. - as Fe</td>
<td>STEL</td>
<td>10 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>3 mg/m3</td>
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<td>Iron oxide - Total dust.</td>
<td>TWA</td>
<td>10 mg/m3</td>
<td>Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)</td>
</tr>
<tr>
<td>Iron oxide - Dust and fume. - as Fe</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)</td>
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</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: No data available.

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

Hygiene measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

9. Physical and chemical properties

Appearance
   Physical state: solid
   Form: Powder
   Color: Orange
   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: 3.1

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

Ingestion: May be ingested by accident. Ingestion may cause irritation and malaise.

Inhalation: In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.

Skin Contact: Moderately irritating to skin with prolonged exposure.

Eye contact: Eye contact is possible and should be avoided.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral Product: No data available.

Dermal Product: No data available.

Inhalation Product: No data available.

Specified substance(s):
Iron oxide LC 0 (Rat): > 210 mg/m3

Repeated dose toxicity Product: No data available.

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

Specified substance(s):
Iron oxide in vivo (Rabbit, 1 - 72 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: No carcinogenic components identified

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

- **Specified substance(s):**
  - **Iron oxide**
    - **LOAEL (Pimephales promelas, 33 d):** 1.6 mg/l experimental result

- **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 instructions: 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. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

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
Not listed.

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

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<tr>
<th>Chemical Identity</th>
<th>Threshold Planning Quantity</th>
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<tr>
<td>Mica</td>
<td>500 lbs</td>
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<tr>
<td>Iron oxide</td>
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SARA 313 (TRI Reporting)
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.

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

US State Regulations

US. California Proposition 65
No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act

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US. Massachusetts RTK - Substance List

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US. Pennsylvania RTK - Hazardous Substances

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<td>Mica</td>
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<tr>
<td>Iron oxide</td>
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</tbody>
</table>

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

Other Regulations:

<table>
<thead>
<tr>
<th>Regulatory VOC (less water and exempt solvent):</th>
<th>0 g/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC Method 310:</td>
<td>0.00 %</td>
</tr>
</tbody>
</table>

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:
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: 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: One or more components in this product are not 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:** 08/05/2015

**Version #:** 1.0

**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.