SAFETY DATA SHEET

SYNCRYSTAL Soft Bronze

SECTION 1. IDENTIFICATION

Product name : SYNCRYSTAL Soft Bronze
Product code : 020917MJ0

Manufacturer or supplier’s details
Company name of supplier : ECKART GmbH
Address : Guentersthal 4
         : Hartenstein  91235
Telephone : +499152770
Telefax : +499152777008
Emergency telephone : CHEMTREC: 800-424-9300
                     : CHEMTREC: 1-703-527-3387 (International)
                     : GBK Gefahrgut Buero GmbH, Ingelheim, Germany:
                     : From outside US: (001) 352-323-3500
                     : (First call in English, response in your language is possible)
                     : US & Canada (toll free):1-800-5355-053

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200
Combustible dust

GHS label elements
Signal Word : Warning
Hazard Statements : May form combustible dust concentrations in air.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron oxide (Fe2O3)</td>
<td>1309-37-1</td>
<td>&gt;= 50 - &lt; 70</td>
</tr>
</tbody>
</table>

1 / 12
Fluorphlogopite (Mg₃K[AlF₂O(SiO₃)]₃) | 12003-38-2 | >= 30 - < 50

SECTION 4. FIRST AID MEASURES

General advice : No hazards which require special first aid measures.

If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : Wash off with soap and water.

In case of eye contact : Remove contact lenses.
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed : None known.

SECTION 5. FIRE-FIGHTING MEASURES

Further information : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Avoid dust formation.

Methods and materials for containment and cleaning up : Pick up and arrange disposal without creating dust.
Sweep up and shovel.
Keep in suitable, closed containers for disposal.
SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion: Normal measures for preventive fire protection.

Advice on safe handling: For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.

Conditions for safe storage: Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid: No materials to be especially mentioned.

Further information on storage stability: Keep in a dry place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron oxide (Fe2O3)</td>
<td>1309-37-1</td>
<td>TWA (total dust)</td>
<td>50 Million particles per cubic foot</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (total dust)</td>
<td>15 mg/m3</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (respirable fraction)</td>
<td>5 mg/m3</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (respirable fraction)</td>
<td>15 Million particles per cubic foot</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable fraction)</td>
<td>5 mg/m3</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Fumes)</td>
<td>10 mg/m3</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (total dust)</td>
<td>15 mg/m3</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (respirable)</td>
<td>5 mg/m3</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td>Substance</td>
<td>TWA (dust and fume)</td>
<td>TWA (Fumes)</td>
<td>TWA (Respirable fraction)</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---------------------</td>
<td>-------------</td>
<td>--------------------------</td>
<td></td>
</tr>
<tr>
<td>Fluorphlogopite ((\text{Mg3K[AlF2O(SiO3)3]}))</td>
<td>5 mg/m(^3) (Iron)</td>
<td>10 mg/m(^3)</td>
<td>5 mg/m(^3) (Fluorine)</td>
<td></td>
</tr>
<tr>
<td>Iron oxide ((\text{Fe}_2\text{O}_3))</td>
<td>15 Million particles per cubic foot</td>
<td>15 mg/m(^3)</td>
<td>5 mg/m(^3) (Fluorine)</td>
<td></td>
</tr>
</tbody>
</table>

**NIOSH REL**

**OSHA P0**

**OSHA Z-1**

**ACGIH**

**OSHA Z-3**
Fluorphlogopite (Mg₃K[AlF₂O(SiO₃)₃]) | 12003-38-2 | TWA | 2.5 mg/m³ (Fluorine) | OSHA Z-1
--- | --- | --- | --- | ---
| | | TWA | 2.5 mg/m³ (Fluorine) | OSHA Z-1
| | | TWA | 2.5 mg/m³ (Fluorine) | ACGIH
| | | TWA | 2.5 mg/m³ (Fluorine) | ACGIH
| | | TWA (Respirable fraction) | 1 mg/m³ (Aluminum) | ACGIH
| | | TWA | 2.5 mg/m³ (Fluorine) | OSHA P0
| | | TWA | 2.5 mg/m³ (Fluorine) | OSHA P0

**Biological occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluorphlogopite (Mg₃K[AlF₂O(SiO₃)₃])</td>
<td>12003-38-2</td>
<td>Fluoride</td>
<td>Urine</td>
<td>Prior to shift (16 hours after exposure ceases)</td>
<td>3 mg/g</td>
<td>ACGIH BEI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fluoride</td>
<td>Urine</td>
<td>End of shift (As soon as possible after exposure ceases)</td>
<td>10 mg/g</td>
<td>ACGIH BEI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fluoride (Fluorine)</td>
<td>Urine</td>
<td>Prior to shift (16 hours after exposure ceases)</td>
<td>2 mg/l</td>
<td>ACGIH BEI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fluoride (Fluorine)</td>
<td>Urine</td>
<td>End of shift (As soon as possible after exposure)</td>
<td>3 mg/l</td>
<td>ACGIH BEI</td>
</tr>
</tbody>
</table>
**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>powder</td>
</tr>
<tr>
<td>Color</td>
<td>bronze</td>
</tr>
<tr>
<td>Odor</td>
<td>odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

SYNCRYSTAL Soft Bronze

Flammability (solid, gas) : Will not burn
combustible dust

Upper explosion limit / Upper flammability limit : No data available
Lower explosion limit / Lower flammability limit : No data available
Vapor pressure : No data available
Relative density : No data available
Solubility(ies)
   Water solubility : insoluble
   Partition coefficient: n-octanol/water : No data available

Autoignition temperature : No data available
Decomposition temperature : No data available
Viscosity : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.
Chemical stability : No decomposition if stored and applied as directed.
Possibility of hazardous reactions : Stable under recommended storage conditions.
   Dust may form explosive mixture in air.
Conditions to avoid : No data available

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity
Not classified based on available information.

Skin corrosion/irritation
Not classified based on available information.

Serious eye damage/eye irritation
Not classified based on available information.

Respiratory or skin sensitization

Skin sensitization
Not classified based on available information.

Respiratory sensitization
Not classified based on available information.
Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

IARC
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA
No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.

NTP
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity
Not classified based on available information.

STOT-single exposure
Not classified based on available information.

STOT-repeated exposure
Not classified based on available information.

Aspiration toxicity
Not classified based on available information.

Further information

Ingredients:
Fluorphlogopite (Mg3K[AlF2O(SiO3)3]):
Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available
Other adverse effects
No data available

Ingredients:
Fluorphlogopite (Mg3K[AlF2O(SiO3)3]):
Additional ecological information: No data available

SECTION 13. DISPOSAL CONSIDERATIONS
Disposal methods
Waste from residues: In accordance with local and national regulations.
Contaminated packaging:
Empty containers should be taken to an approved waste handling site for recycling or disposal.
In accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION
International Regulations
Remarks: Not classified as dangerous in the meaning of transport regulations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

SECTION 15. REGULATORY INFORMATION
EPCRA - Emergency Planning and Community Right-to-Know
CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.
SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.
SARA 302 Extremely Hazardous Substances Threshold Planning Quantity
This material does not contain any components with a section 302 EHS TPQ.
SARA 311/312 Hazards: Combustible dust
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act
This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61). This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F). This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC’s (40 CFR 60.489).

Clean Water Act
This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A. This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3. This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations
Massachusetts Right To Know
Iron oxide (Fe2O3) 1309-37-1

Pennsylvania Right To Know
Iron oxide (Fe2O3) 1309-37-1
Fluorphlogopite (Mg3K[AlF2O(SiO3)3]) 12003-38-2

California Prop. 65
WARNING: This product can expose you to chemicals including lead and cadmium, which is/are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California List of Hazardous Substances
Iron oxide (Fe2O3) 1309-37-1
Fluorphlogopite (Mg3K[AlF2O(SiO3)3]) 12003-38-2
California Permissible Exposure Limits for Chemical Contaminants

Iron oxide (Fe₂O₃) 1309-37-1

Fluorphlogopite (Mg₃K[AlF₂O(SiO₃)₃]) 12003-38-2

The ingredients of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

TSCA : On TSCA Inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)
NIOSH REL : USA. NIOSH Recommended Exposure Limits
OSHA P0 : USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3 : USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
ACGIH / TWA : 8-hour, time-weighted average
NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
OSHA P0 / TWA : 8-hour time weighted average
OSHA Z-1 / TWA : 8-hour time weighted average
OSHA Z-3 / TWA : 8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. 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.

Revision Date : 03/21/2018

US / Z8