

SAFETY DATA SHEET



According to OSHA Hazard Communication Standard 29CFR 1910.1200 (HCS 2012)

| | | | |
|-----------------------|--------------|-------------------------------------|--------------|
| 1146055 | | Crystal Blue Gemstone 4.7 Lb | |
| Product specification | RS_FP_606642 | Revision Date | 11/03/2020 |
| Version | 1.0 | Print Date | 09/03/2021 |
| Material number | 1146055 | Page | Page 1 of 10 |

SECTION 1. IDENTIFICATION

Product name : **1146055**
Crystal Blue Gemstone 4.7 Lb

Material number : **1146055**

Manufacturer or supplier's details

Company name of supplier : Ferro Corporation
Address : 6060 Parkland Blvd. Suite 250
Mayfield Heights OH 44124-4185
Telephone : (216) 875-5600

Emergency telephone number

In-Country Number : (800)424-9300
CHEMTREC Global Number : +(1)-703-527-3887 (Call Collect)

Recommended use of the chemical and restrictions on use

Recommended use : Industrial use
Restrictions on use : Reserved for industrial and professional use.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS Label element

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
Chemical nature : inorganic pigment

Hazardous components

| Chemical Name | CAS-No. | Concentration (%) |
|--------------------------------------|------------|-------------------|
| Co-Al spinel blue CI Pigment Blue 28 | 1345-16-0 | >= 30 - < 50 |
| Co-Cr-Al spinel blue green | 68187-11-1 | >= 20 - < 30 |

SECTION 4. FIRST AID MEASURES

General advice : Consult a physician.
If inhaled : If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.
In case of skin contact : Take off contaminated clothing and shoes immediately.

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- In case of eye contact : Wash off with soap and plenty of water.
: Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
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. FIREFIGHTING MEASURES

- Specific hazards during firefighting : Do not use a solid water stream as it may scatter and spread fire.
Cool closed containers exposed to fire with water spray.
- Hazardous combustion products : No hazardous combustion products are known
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Evacuate personnel to safe areas.
- Environmental precautions : Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Keep in suitable, closed containers for disposal.
Clean contaminated floors and objects thoroughly while observing environmental regulations.

SECTION 7. HANDLING AND STORAGE

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

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

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| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---|------------|----------------------------------|---|-----------|
| Co-Al spinel blue CI Pigment Blue 28 | 1345-16-0 | TWA | 0.02 mg/m ³ (Cobalt) | ACGIH |
| | | PEL | 0.1 mg/m ³ (Cobalt) | OSHA P0 |
| | | PEL | 0.05 mg/m ³ (Cobalt) | NIOSH REL |
| Co-Cr-Al spinel blue green | 68187-11-1 | TWA | 0.5 mg/m ³ (chromium) | OSHA Z-1 |
| | | TWA | 0.02 mg/m ³ (Cobalt) | ACGIH |
| | | TWA | 0.5 mg/m ³ (chromium) | NIOSH REL |
| | | TWA | 0.5 mg/m ³ (chromium) | ACGIH |

Biological occupational exposure limits

| Components | CAS-No. | Control parameters | Biological specimen | Sampling time | Permissible concentration | Basis |
|---|-----------|--------------------|---------------------|---------------|---------------------------|--------------|
| Co-Al spinel blue CI Pigment Blue 28 | 1345-16-0 | Cobalt | Urine | | 0.015 mg/l | ACGIH BEI |
| | | Cobalt | Blood | | 0.001 mg/l | ACGIH BEI |

Engineering measures : No data available

Personal protective equipment

- Eye protection : Safety glasses
Ensure that eyewash stations and safety showers are close to the workstation location.
- Protective measures : Wear suitable protective equipment.
When using do not eat, drink or smoke.
- Hygiene measures : Wash hands before breaks and immediately after handling the product.
Remove contaminated clothing and protective equipment before entering eating areas.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : powder
- Colour : blue
- Odour : odourless
- Odour Threshold : No data available
- pH : Not applicable
- Melting point/range : No data available
- Boiling point/boiling range : Not applicable

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| | | |
|--|---|--|
| Flash point | : | Not applicable |
| Evaporation rate | : | Not applicable |
| Flammability (solid, gas) | : | No data available |
| Burning rate | : | No data available |
| Upper explosion limit | : | Not applicable |
| Lower explosion limit | : | Not applicable |
| Vapour pressure | : | Not applicable |
| Relative vapour density | : | Not applicable |
| Relative density | : | No data available |
| Bulk density | : | No data available |
| Solubility(ies) | : | |
| Water solubility | : | insoluble |
| Solubility in other solvents | : | No data available |
| Partition coefficient: n-octanol/water | : | No data available |
| Auto-ignition temperature | : | Not determined |
| Decomposition temperature | : | No data available |
| Viscosity | : | |
| Viscosity, kinematic | : | Not applicable |
| Explosive properties | : | No data available |
| Oxidizing properties | : | Not applicable |
| Refractive index | : | Not applicable |
| Volatile organic compounds (VOC) content | : | This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489). This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450. |

SECTION 10. STABILITY AND REACTIVITY

| | | |
|------------------------------------|---|---|
| Reactivity | : | Stable under recommended storage conditions. |
| Chemical stability | : | No decomposition if stored and applied as directed. |
| Possibility of hazardous reactions | : | No hazards to be specially mentioned. |
| Conditions to avoid | : | No data available |
| Incompatible materials | : | No data available |
| Hazardous decomposition products | : | No data available |

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SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

inhalation (dust/mist/fume)

Skin

Ingestion

Eye contact

Acute toxicity

Not classified based on available information.

Components:

Co-Al spinel blue CI Pigment Blue 28:

Acute oral toxicity : LD50 (Rat, male): > 10,000 mg/kg
Method: OECD Test Guideline 401
GLP: no

Co-Cr-Al spinel blue green:

Acute oral toxicity : LD50 (Rat): > 10,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:

Co-Al spinel blue CI Pigment Blue 28:

Species: Rabbit
Exposure time: 4 h
Assessment: No skin irritation
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: no

Co-Cr-Al spinel blue green:

Species: human keratinocytes
Method: OECD Test Guideline 439
Result: No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Co-Al spinel blue CI Pigment Blue 28:

Species: Rabbit
Result: No eye irritation
Exposure time: 1 h
Assessment: No eye irritation
Method: OECD Test Guideline 405
GLP: yes

Co-Cr-Al spinel blue green:

Species: Rabbit

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Result: No eye irritation
Exposure time: 72 h
Method: OECD Test Guideline 405
GLP: yes

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC

No component 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 identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component 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 Specific Target Organ Toxicity - single exposure

Not classified based on available information.

STOT Specific Target Organ Toxicity - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Co-Al spinel blue CI Pigment Blue 28:

Toxicity to fish : LC50 (Fish): 1,000 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 10,000 mg/l
Exposure time: 48 h

Co-Cr-Al spinel blue green:

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Toxicity to fish : LC50 (Fish): 1,000 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 10,000 mg/l
Exposure time: 48 h

Persistence and degradability

Components:

Co-Al spinel blue CI Pigment Blue 28:

Biodegradability : Remarks: No data available

Co-Cr-Al spinel blue green:

Biodegradability : Remarks: No data available

Bioaccumulative potential

Components:

Co-Al spinel blue CI Pigment Blue 28:

Bioaccumulation : Remarks: No data available

Co-Cr-Al spinel blue green:

Bioaccumulation : Remarks: No data available

Mobility in soil

Components:

Co-Al spinel blue CI Pigment Blue 28:

Distribution among environmental compartments : Remarks: No data available

Co-Cr-Al spinel blue green:

Distribution among environmental compartments : Remarks: No data available

Other adverse effects

Product:

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: 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).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of wastes in an approved waste disposal facility.

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SECTION 14. TRANSPORT INFORMATION

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

TSCA list : TSCA_12b - Not relevant

TSCA list : TSCA 5a - Not relevant

EPCRA - Emergency Planning and Community Right-to-Know Act

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 311/312 Hazards : No SARA Hazards

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This product contains components that are reportable under the regulation.

Cobalt, inorganic compounds

Chromium III Compounds Cobalt, inorganic compounds

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 contains components that are reportable under the regulation.

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).

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This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCOMI 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 contains components that are reportable under the regulation.

Massachusetts Right To Know

This product contains components that are reportable under the regulation.

Pennsylvania Right To Know

This product contains components that are reportable under the regulation.

New Jersey Right To Know

This product contains components that are reportable under the regulation.

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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

- EINECS (European Union) : On the inventory, or in compliance with the inventory
- SWISS (Switzerland) : On the inventory, or in compliance with the inventory
- TSCA (United States) : On TSCA Inventory
- DSL/NDSL (Canada) : All components of this product are on the Canadian DSL.
- AICS (Australia) : On the inventory, or in compliance with the inventory
- NZioC (New Zealand) : On the inventory, or in compliance with the inventory
- ENCS (Japan) : On the inventory, or in compliance with the inventory
- ISHL (Japan) : On the inventory, or in compliance with the inventory
- KECI (Korea) : On the inventory, or in compliance with the inventory
- PICCS (Philippines) : On the inventory, or in compliance with the inventory
- IECSC (China) : On the inventory, or in compliance with the inventory
- TCSI (Taiwan) : On the inventory, or in compliance with the inventory
- CICR (Turkey) : On the inventory, or in compliance with the inventory

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INSQ (Mexico) : Not in compliance with the inventory

SECTION 16. OTHER INFORMATION

Revision Date : 11/03/2020

The information provided in this 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.

US / EN