SDS Glass Frit, Lead Free GPP-27



SECTION 1: Identification of the substance/mixture and of the company

Product Name: Glass Painting Enamel, Lead Free

Identified uses: For enameling

Synonyms: Glass Painting Enamel, CX4273, Bright Green

Supplier: Thompson Enamel

650 Colfax Avenue Bellevue, Ky. 41073 U.S.A.

Phone: 859-291-3800 Fax: 859-291-1849

Email: info@thompsonenamel.com

SECTION 2: Hazards identification

EEC Risk Phrases:

EEC Safety Phrases:

Not Evaluated

Not Evaluated

Methods for Cleanup: See Section XI for Toxicological Information.

SECTION 3: Composition/Information on ingredients

Ingredients:	% Weight			
	CAS No:	<u>EINECS</u>	(Typical)	
Cobalt Titanate Green Spinel	68186-85-6*	269-047-4	5-10	
Titanium Dioxide	13463-67-7		0-5	
Zinc-Boro-Silicate Glass Frit	65997-18-4*		75-95	

Synonyms: CX4273 - Green

As Regulated (Related Exposure Limits)	OSHA PEL** (mg/m³)	OSHA PEL (mg/m³)	ACGIH TLV (mg/m³)	%Metal (Typical)	Sara <u>313</u>
Cobalt metal, dust and fumes (as Co)	0.05	0.1	0.02	0-2 0-5	Yes No
Fluorides (as F) Glass- fused Particulates (Insoluble) Not Otherwise Regulated		2.5 5 Respirable, 15 mg/m3 Total	2.5 3.0 Respirable, 10 mg/m3 inhalable	75-95	No
Nickel metal and insoluble compounds (as Ni)		1	0.2 Respirable	0-3	Yes
Silica -Quartz		10 /%SiO2 +2 (Respirable) Or 30/%SiO2+2 (Total dust)	0.05 Respirable	0-10	No
Titanium dioxide (Total Dust)	10	15	10	0-5	No

Zinc compounds (as Zn) None 25-30 Yes

Zirconium compounds (as Zr) 5, 10 mg/m3 0-5

STEL

No

** The following PEL's were modified in 1989 but were challenged in 1992 and vacated. Several state programs may still recognize these.

SECTION 4: First aid measures

If inhaled: If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably

mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

On ingestion: If swallowed, induce vomiting immediately by giving two glasses of water and sticking

finger down throat. Never give anything by mouth to an unconscious person. Call a

physician.

On contact with eyes: On contact with eyes flush eyes with plenty of water for at least fifteen (15) minutes.

Call a physician.

On skin contact: On skin contact, wash thoroughly with soap and water.

SECTION 5: Firefighting measures

Suitable extinguishing media: This product will not burn. Use suitable extinguishing media for

fighting surrounding fire.

Unsuitable extinguishing media: Not applicable Emitted when burned: Not applicable

Special protective equipment: This product will not burn. Use appropriate techniques for fighting

surrounding fire.

Further information: None

SECTION 6: Accidental release measures

Personal precautions: Maintain appropriate dust control.

Environmental precautions: Prevent contamination of soils, drains and surface water.

Methods for cleanup: Transfer material into closed container for re-use or disposal.

SECTION 7: Handling and storage

Handling: Good housekeeping procedures should be followed to prevent dust during processing. Do

not eat, drink or smoke in work areas. Wash thoroughly with soap and water after

handling. Provide eye wash stations in areas of handling.

Storage: Store material in a closed container. Normal warehousing

SECTION 8: Exposure Controls/Personal protection

Engineering controls/measures: Use mechanical ventilation to keep dust below regulatory

standards (see Section II). Design criteria usually cannot be

specified in an MSDS because of its complexity.

Personal Protective Equipment:

Respiratory protection: MSHA/NIOSH respirators approved for dusts TC-21C or

NIOSH approved cartridges for Non-oil aerosols, N95, N99,

N100 (42 CFR 84).

Hand protection:

Eye protection:

Rubber, PVC coated gloves, impermeable.

Safety Glasses with side shields, mono goggles.

Body protection:

No special precautions (see hand protection).

General safety and hygiene measures: Good housekeeping procedures should be followed to

prevent dust during processing.

SECTION 9: Physical and chemical properties

Appearance: Green Powder
Odor: No Odor

Melting point/melting range:

Boiling point/boiling range:

Flash point:

Combustibility:

Not applicable

Not applicable

Explosion limits:

Not applicable Lower Vol. %: Not applicable Upper Vol. %: Ignition temperature: Not applicable Self-ignition: Not applicable Self-ignition temperature: Not applicable Explosion hazard: Not applicable Fire promoting properties: Not applicable Not applicable Vapor pressure:

Specific gravity: >1

Bulk density: No data available Packing density: No data available

Solubility in Water: <2

Solubility in other solvents: Negligible

pH value:

Octanol/water partition coefficient (log POW):

Viscosity:

Other information:

No data available

Not applicable

Not applicable

SECTION 10: Stability and reactivity

Conditions to avoid:

Materials to avoid:

None known

Hazardous reactions:

None known

Hazardous decomposition products:

None known

SECTION 11: Toxicological information

Acute Toxicity

LD50/oral/rat:Not TestedLD50/inhal/rat:Not TestedSensitizing:None expectedPrimary skin irritation/rabbit:No data availablePrimary mucous membrane irritation/rabbit' eyes:No data available

ADDITIONAL INFORMATION:

Zinc-Boro-Silicate or Zinc-Alkali-Boro-Silicate Glass Frit-

Repeated overexposure to this compound may cause eye, skin and respiratory tract irritation. Some compounds of the metals used in the manufacturing of this Frit, Zinc, have demonstrated various toxic properties (1,2,3,4). However, there is no evidence that this frit has these toxic characteristics.

Long term overexposure to silica causes pneumoconiosis and silicosis, a form of pulmonary fibrosis. Continued exposure to silica can lead to cardiopulmonary impairment. Symptoms are usually delayed (10 years or more), but may appear in as little as 8-18 months after initial exposure.

Zinc is not inherently a toxic element. However, when heated, it evolves a fume of Zinc Oxide, when inhaled fresh, can cause a disease known as "Brass Chills" characterized by sweet taste, throat dryness, cough, weakness, generalized aching, fever, nausea, and vomiting. It is possible for people to become immune to it, but the immunity can be broken by cessation to exposure for a few days.

Routes of Entry:

Eyes: No Skin: No Inhalation: Yes Ingestion: Yes

CARCINOGENICITY: NTP: Yes IARC Monographs: Yes

OSHA Regulated: No

Crystalline silica has been reviewed by IARC. IARC found limited evidence for carcinogenicity of crystalline silica in humans and sufficient evidence in experimental animals. Crystalline silica inhaled in the form of quartz or crystabolite from occupational sources is carcinogenic to humans (IARC Monograph, Volume 68). Silica, crystalline is known to be a human carcinogen (NTP 10th Edition) Warning: This product contains a chemical known to the State of California to cause cancer.

Signs and Symptoms of Exposure: Irritation of the eyes, skin and respiratory tract.

Medical Conditions Generally Aggravated by Exposure: Respiratory and skin disorders aggravated by dust.

SECTION 12: Ecological information

No specific ecological data available for this product.

SECTION 13: Disposal considerations

Waste disposal recommendations: Trash can.

SECTION 14: Transportation information

This product is not Department of Transportation (DOT) regulated.

This product is not TDG (Canada) regulated.

SECTION 15: Regulatory information

Labeling according to EEC Directives: Not Evaluated

SARA

SARA 312:

Health: Immediate (Acute): No* Fire: None

Delayed (Chronic): Yes** Reactivity: None

Sudden release of pressure: None

SARA 313:

THIS PRODUCT CONTAINS A CHEMICAL OR CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372. THIS INFORMATION MUST BE INCLUDED IN ALL MSDS THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

5-10% Cobalt Compound

5-10% Nickel Compound

75-95% Zinc Compound

Inventories

The ingredients of this product have been listed in the following inventories:

Europe EINECS: Listed U.S.A. TSCA: Listed

HMIS Code:

SECTION 16: Other information

References

DOT Department of Transportation

OSHA Occupational Safety and Health Administration

CAS Chemical Abstracts Service
TSCA Toxic Substances Control Act

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

The information and recommendations contained in this SDS have been compiled from sources believed to be reliable and to represent current opinion on the subject when the SDS was prepared. No warranty, guaranty or representation is made as to the correctness or sufficiency of the information. The user of this product must decide what safety measures are necessary to safely use this product, either alone or in combination with other products, and determine its environmental regulatory compliance obligations under any applicable federal or state laws.

UPDATED MAY 2015

^{*}Not an acute hazard, however may cause irritation due to abrasiveness.

^{**} See Section 11