



MATERIAL SAFETY DATA SHEET

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Emergency telephone number
 CHEMTREC: 1-800-424-9300
 CHEMTREC (outside U.S.): 1-703-527-3887
 Phone Number: 1-724-223-5900

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Name: GS LA LMC-6044P Black Aerosol,Glass/Ceram **Date of Preparation:** 06/09/2011
CAS-No.: Mixture
Product Code: 1379493

2. HAZARDS IDENTIFICATION

Emergency Overview

Warning

Flammable liquid. Vapors may form explosive mixture with air. Vapors may travel to a source and flash back. May cause respiratory tract, eye and skin irritation. May cause allergic skin or respiratory reaction. Avoid contact with the skin and the eyes. Contains crystalline silica which causes silicosis and lung cancer.

		<u>HMIS</u>	<u>NFPA 704</u>
Color:	Black	2*	2
Physical state:	Liquid	3	3
Odor:	Alcohol-like	0	0
		X	

Potential Health Effects

Principle routes of exposure: Inhalation, ingestion, skin and eye contact.

Eye contact: Contact with eyes may cause irritation.

Skin contact: Prolonged skin contact may cause skin irritation. May cause allergic skin reaction.

Inhalation: Over-exposure by inhalation may cause respiratory irritation. May cause severe allergic respiratory reaction.

Ingestion: May irritate digestive tract.

Chronic toxicity: Titanium Dioxide is listed by IARC as possibly carcinogenic to humans (Group 2B) based on inadequate evidence of carcinogenicity in humans and sufficient evidence in experimental animals. Chronic inhalation exposure can cause lung damage. Respirable crystalline silica has been classified as a Group I (sufficient evidence in humans for carcinogenicity) carcinogenic by IARC and is listed by NTP as a substance which may reasonably be anticipated to be a carcinogen. Long term inhalation causes lung damage (silicosis and cancer). Suspect cancer hazard (cobalt compound).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Weight %
Petroleum gases, liquefied, sweetened	68476-86-8	20 - 30%
Proprietary complex inorganic black pigment		20 - 30%
2-Butoxyethanol	111-76-2	10 - 20%
1-Methoxy-2-propanol acetate	108-65-6	5 - 10%
Frit*		20 - 30% (May contain - see below)
Titanium Dioxide	13463-67-7	<0.5%
Quartz silica	14808-60-7	<0.5%

The specific chemical identities are being withheld as a trade secret (29CFR1910.1200).

* Frit, with CAS # [65997-18-4], is a mixture of inorganic chemical substances produced by rapidly quenching a molten, complex combination of materials, confining the chemical substances thus manufactured as non-migratory components of glassy solid flakes or granules. These components are present as part of the Frit.

4. FIRST AID MEASURES

Eye contact:	Rinse immediately with plenty of water, also under the eyelids. Get medical attention if irritation develops
Skin contact:	Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing before re-use. If symptoms persist call a physician
Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician
Ingestion:	Drink plenty of water. Do not induce vomiting. Consult a physician if necessary.
Notes to physician:	Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flash point (°C): 14 (57°F) Method: Estimated

Suitable extinguishing media:	Use dry chemical, CO2, water spray or "alcohol" foam.
Special protective equipment for firefighters:	As in any fire, wear self-contained breathing apparatus (pressure-demand, NIOSH approved or equivalent) and full protective gear
Unusual hazards:	Flammable. Vapours may form explosive mixture with air. Vapors are heavier than air and may spread along floors. Vapor may travel considerable distance to source of ignition and flash back.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Flammable liquid. Remove all sources of ignition. Evacuate area of all unnecessary personnel. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.
Environmental precautions:	Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.
Methods for cleaning up:	Wear personal protective equipment. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Clean contaminated surface thoroughly. Dispose of promptly.

7. HANDLING AND STORAGE

Handling:
Do not take internally. Wash thoroughly after handling. Avoid contact with skin, eyes and clothing. Use only in well-ventilated areas.

Storage:
Minimize dust generation during handling. Use adequate ventilation.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits

Minimize exposure in accordance with good hygiene practice.

Components	OSHA	ACGIH
Frit	0.5 mg/m ³ TWA Sb 5 mg/m ³ TWA Zr 5 mg/m ³ Ceiling Mn	0.5 mg/m ³ TWA Sb 1 mg/m ³ TWA Cu dust and mist 5 mg/m ³ TWA Zr 0.2 mg/m ³ TWA Mn
Proprietary complex inorganic black pigment	0.5 mg/m ³ TWA Cr	0.5 mg/m ³ TWA Cr
2-Butoxyethanol	50 ppm TWA 240 mg/m ³ TWA prevent or reduce skin absorption	20 ppm TWA
Titanium Dioxide	15 mg/m ³ TWA total dust	10 mg/m ³ TWA
Quartz silica	Listed	0.025 mg/m ³ TWA respirable fraction

- Engineering measures:** Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are proximal to the work-station location.
- Eye protection:** Safety glasses with side-shields.
- Skin and body protection:** Lightweight protective clothing. Keep working clothes separately. Remove and wash contaminated clothing before re-use.
- Hand protection:** Impervious gloves.
- Respiratory protection:** NIOSH-approved respirators should be worn where engineering controls and work practices do not reduce exposure to or below the PEL. In case of insufficient ventilation wear suitable respiratory equipment. Seek professional advise prior to respirator selection and use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Black	Physical state:	Liquid
Odor:	Alcohol-like	Molecular weight:	No data available
Boiling point/range (°C):	No data available	pH:	No data available
Melting point/range (°C):	No data available	Specific gravity (Water =1):	No data available
Vapor density:	Non-volatile	Vapor pressure :	No data available
Evaporation Rate (Water = 1)	Non-volatile	Water solubility:	Insoluble
VOC content (%)	0		

10. STABILITY AND REACTIVITY

- Stability:** Stable at normal conditions
- Polymerization** Will not occur.
- Hazardous decomposition products:** Thermal decomposition can lead to release of irritating gases and vapors
- Materials to avoid:** None known
- Conditions to avoid** None known

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	Information given is based on data on the components and the toxicology of similar products
Chronic Toxicity:	In lifetime inhalation studies of rats, airborne respirable size titanium dioxide particles have been shown to cause lung tumors at concentrations associated with substantial particle lung burdens and consequential pulmonary overload and inflammation. However, other laboratory animals such as mice and hamsters did not develop lung tumors under similar testing with titanium dioxide. Human epidemiology studies do not suggest an association between occupational exposure to titanium dioxide and risk for cancer. Contains crystalline silica which causes silicosis and lung cancer.
Carcinogenic Effects:	Respirable crystalline silica has been classified as a Group I (sufficient evidence in humans for carcinogenicity) carcinogenic by IARC and is listed by NTP as a substance which may reasonably be anticipated to be a carcinogen. Crystalline silica is also a known cause of silicosis, a non-cancerous lung disease caused by excessive exposure to crystalline silica. IARC has identified Cobalt and Cobalt compounds as "possibly carcinogenic" as a group; however IARC did not specifically identify the cobalt compound in this product as a possible carcinogen.
Target Organ Effects:	Titanium dioxide: Respiratory system. Silica: Respiratory system. Cobalt compound: Skin, respiratory system. Chromium compound (inorganic): Eyes, skin, respiratory system.

Component information, if any, is listed below

Frit

LD50s and LC50s:	Oral LD50 (Rat) = 2000 mg/kg
OSHA - Select Carcinogens:	Present
NTP:	Known Human Carcinogen
NTPS. Carcinogen:	Reasonably Anticipated To Be A Human Carcinogen
IARC - Group 1:	Listed
IARC - Group 2A:	Listed
IARC - Group 2B:	Listed

2-Butoxyethanol

LD50s and LC50s:	Inhalation LC50 (Rat) = 2.21 mg/L Dermal LD50 (Rabbit) = 220 mg/kg Dermal LD50 (Rat) = 2270 mg/kg Inhalation LC50 (Rat) = 450 ppm Oral LD50 (Rat) = 470 mg/kg
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1-Methoxy-2-propanol acetate

LD50s and LC50s:	Oral LD50 (Rat) = 8532 mg/kg Dermal LD50 (Rabbit) = 5000 mg/kg
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Titanium Dioxide

LD50s and LC50s:	Oral LD50 (Rat) = 10000 mg/kg
OSHA - Select Carcinogens:	Present
IARC - Group 2B:	Listed

Quartz silica

LD50s and LC50s:	Oral LD50 (Rat) = 500 mg/kg
OSHA - Select Carcinogens:	Present
NTP:	Known Human Carcinogen
IARC - Group 1:	Listed

12. ECOLOGICAL INFORMATION

Aquatic toxicity: No data is available on the product itself. Information given is based on data on the components and the ecotoxicology of similar products.

2-Butoxyethanol

Ecotoxicity - Fish Species Data:
96 h LC50 (Lepomis macrochirus) = 1490 mg/L static
96 h LC50 (Lepomis macrochirus) = 2950 mg/L
Ecotoxicity - Water Flea Data:
24 h EC50 (Daphnia magna) = 1698 - 1940 mg/L
48 h EC50 (Daphnia magna) = 1000 mg/L

1-Methoxy-2-propanol acetate

Ecotoxicity - Fish Species Data:
96 h LC50 (Pimephales promelas) = 161 mg/L static
Ecotoxicity - Water Flea Data:
48 h EC50 (Daphnia magna) = 500 mg/L

Persistence and degradability: Not determined

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products: Waste must be disposed of in accordance with federal, state and local environmental control regulations. Where possible recycling is preferred to disposal or incineration.

14. TRANSPORT INFORMATION

DOT (U.S.)

UN/ID No: UN1263
Proper shipping name: Paint related material
U.S. DOT - Hazard Class: 3
Packing group: III

TDG (Canada)

Proper shipping name: Paint related material
Packing group: III

15. REGULATORY INFORMATION

U.S. Regulations:

TSCA: Not subject to TSCA 12(b) Export Notification

SARA 313:

Components	SARA 313:
Frit (20 - 30%)	0.1 % de minimis concentration 1.0 % de minimis concentration 0.1 % Supplier notification limit
2-Butoxyethanol (10 - 20%)	1.0 % de minimis concentration
Chromium compounds (as Cr) (5 - 10%)	1.0 % de minimis concentration
Zinc compound (as Zn) (5 - 10%)	1.0 % de minimis concentration
Cobalt compounds, (as Co) (5 - 10%)	0.1 % de minimis concentration
Nickel compounds (as Ni) (1 - 5%)	0.1 % de minimis concentration

State Regulations

This product or its ingredients have been evaluated for New Jersey, Pennsylvania, and California Prop 65 supplier notification requirements. Substances that are subject to notification requirements, if any, are listed below.

Components	State Regulations - NJ; PA
Nickel compounds (as Ni)	Listed (NJRTK) Listed (PARTK)

Components	State Regulation - CA Prop65
Toluene	Developmental Toxicity Reproductive Female
Nickel compounds (as Ni)	Carcinogen
Cobalt compounds, (as Co)	Carcinogen
Quartz silica	Carcinogen

Canadian WHMIS

WHMIS hazard class: D2B Toxic materials D2A Very toxic materials B2 Flammable liquid

Canadian Ingredient Disclosure List (IDL):

Components	Canada - WHMIS Ingredient Disclosure:
Frit	1
2-Butoxyethanol	1
Chromium compounds (as Cr)	0.1
Cobalt compounds, (as Co)	0.1
Nickel compounds (as Ni)	0.1

International Inventories

TSCA 8(b):	Listed or exempt.
Canadian DSL/NDSL list EC-No.	All ingredient(s) are listed on the DSL or NDSL
Philippines (PICCS):	Listed.
Japan (ENCS):	One or more ingredient(s) are not on the ENCS list.
Korea (KECL):	Listed.
China (IECS):	Listed.
Australia (AICS):	One or more ingredient(s) are not on the AICS list.
New Zealand (NZIoC):	One or more ingredient(s) are not on the NZIoC list.

16. OTHER INFORMATION

For Industrial Use Only

Prepared by: Ferro Technical Center

The information and recommendations contained in this Material Safety Data Sheet have been compiled from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the MSDS 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.

End of Safety Data Sheet