MATERIAL SAFETY DATA SHEET

Lilly-Ram Chemical Company, LLC.
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Emergency telephone number
CHEMTREC: 1-800-424-9300
CHEMTREC (outside U.S.): 1-703-527-3887
Plant Number: 1-909-223-9699

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

Product Name: LVOC Pigmented Gelcoat
CAS-No.: Mixture
Recommended use: Industrial Use Only
Date of Preparation: 07/24/2012

2. HAZARDS IDENTIFICATION

Emergency Overview
Warning
Flammable liquid and vapor. Vapors may travel to a source and flash back. May cause respiratory tract, eye and skin irritation. May cause sensitization of susceptible persons by skin contact. May be harmful if swallowed. Overexposure may cause CNS depression. May cause allergic skin or respiratory reaction.

Color: Off white
Physical state: Liquid
Odor: Pungent

	HMIS	NFPA 704
Health:	2*	2
Flammability:	3	3
Physical Hazard:	2	2
PPE:		

Potential Health Effects

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

Eye contact: Contact with eyes may cause irritation with discomfort, tearing or blurring of vision.

Skin contact: Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization of susceptible persons. May cause allergic skin reaction.

Inhalation: May be harmful by inhalation. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. During heating, polymer fume fever may result with symptoms of chest pain or tightness, shortness of breath, cough, malaise, muscle aches, increased heart rate, fever, chills, sweats, nausea and headache. Polymer thermal decomposition products may be absorbed through inhalation and cause target organ effects. May cause central nervous system depression or effects. May cause severe allergic respiratory reaction.

Ingestion: May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration of this product into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury.

Chronic toxicity: Suspect cancer hazard (cobalt compound). This product contains amorphous silica. Overexposure by inhalation of respirable dust may cause respiratory problems including pneumoconiosis.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Weight %
Styrene	100-42-5	20 - 30%
Resin	Proprietary	20 - 30%
Talc	14807-96-6	10 - 20%
Aluminum hydroxide	21645-51-2	5 - 10%
Methyl Methacrylate Monomer	80-62-6	5 - 10%

3. COMPOSITION/INFORMATION ON INGREDIENTS

Silica	7631-86-9	1 - 5%
Silica, amorphous, fumed, cryst.-free	112945-52-5	0.5 - 1%
Cobalt 2-Ethylhexanoate	136-52-7	0.1 - 0.5%

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

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): 28.33(82°F) Method: Closed cup

Suitable extinguishing media: Foam. Dry chemical. Carbon dioxide (CO2).

Hazardous decomposition products: Carbon monoxide. Carbon dioxide (CO2). Hydrocarbons. Aldehydes.

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. Vapors 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. Remove all non-essential people from the affected area. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin, eyes and clothing. Wear personal protective equipment.

Environmental precautions: Water runoff can cause environmental damage. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

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:
Use explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition. Handle in accordance with good industrial hygiene and safety practice. Use only in area provided with appropriate exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Do not eat, drink, or smoke in areas of use or storage. Do not take internally. Wash thoroughly after handling.

Storage:
Store at room temperature in the original container. Keep tightly closed in a dry and cool place. Keep product and empty container away from heat and sources of ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits

Minimize exposure in accordance with good hygiene practice.

Components	OSHA	ACGIH
Styrene	100 ppm TWA 200 ppm Ceiling	40 ppm STEL 20 ppm TWA
Talc	20 mppcf TWA	2 mg/m^3 TWA particulate matter containing no asbestos and <1% crystalline silica, respirable fraction
Methyl Methacrylate Monomer	100 ppm TWA 410 mg/m^3 TWA	100 ppm STEL 50 ppm TWA
Silica	20 mppcf TWA Listed	Not established

Engineering measures: Provide appropriate exhaust ventilation wherever dust, mist, vapors, or fumes can be generated. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Eye protection: Safety glasses with side-shields. If splashes are likely to occur, wear. Goggles.

Skin and body protection: Lightweight protective clothing. If conditions warrant, use . Chemical resistant apron. impervious clothing.

Hand protection: Impervious gloves. Follow the recommendations given by the manufacturer of protective 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 advice prior to respirator selection and use.

Hygiene measures: Wash hands before breaks and at the end of workday. Keep working clothes separate. Wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Off white	**Physical state:**	Liquid
Odor:	Pungent	**Molecular weight:**	No data available
Boiling point/range (°C):	100	**pH:**	No data available
Melting point/range (°C):	No data available	**Specific gravity (Water =1):**	1.21233
Vapor pressure :	4.5 mm Hg	**Water solubility:**	Negligible
VOC content (%)	36.87	**HAPS content (%):**	36.03

10. STABILITY AND REACTIVITY

Stability: May be unstable resulting in polymerization.

Polymerization Polymerization can occur when contacted with bases such as amines, e.g. two part epoxy glue.

Hazardous decomposition products: Carbon monoxide. Carbon dioxide (CO2). Hydrocarbons. Aldehydes.

Materials to avoid: Incompatible with strong acids and bases. Incompatible with oxidizing agents. Peroxides.

Conditions to avoid Excessive temperatures.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: Information given is based on data on the components and the toxicology of similar products.

Carcinogenic Effects: IARC has classified Styrene as a possible carcinogen (Class 2B). There is currently not sufficient evidence to indicate that Styrene is a human carcinogen. The IARC 2B classification is based on animal data generated from Styrene oxide. Styrene oxide is a metabolite of Styrene. IARC has identified Cobalt and Cobalt compounds as "possibly carcinogenic" as a group.

Target Organ Effects: Cobalt compound: Skin, respiratory system. Amorphous silica: Respiratory system, eyes.

Component information, if any, is listed below

Styrene

LD50s and LC50s: Oral LD50 (Rat) = 1000 mg/kg
Inhalation LC50 (Rat) = 11.8 mg/L

OSHA - Select Carcinogens: Present

NTPS. Carcinogen: Reasonably Anticipated To Be A Human Carcinogen

IARC - Group 2B: Listed

Aluminum hydroxide

LD50s and LC50s: Oral LD50 (Rat) = 5000 mg/kg

Methyl Methacrylate Monomer

LD50s and LC50s: Inhalation LC50 (Rat) = 400 ppm
Inhalation LC50 (Rat) = 4632 ppm
Oral LD50 (Rat) = 7872 mg/kg
Dermal LD50 (Rabbit) = 5 g/kg

Silica

LD50s and LC50s: Inhalation LC50 (Rat) = 2.2 mg/L
Dermal LD50 (Rabbit) = 2000 mg/kg
Oral LD50 (Rat) = 5000 mg/kg

Silica, amorphous, fumed, cryst.-free

LD50s and LC50s: Oral LD50 (Rat) = 3160 mg/kg

Cobalt 2-Ethylhexanoate

IARC - Group 2B: Listed

12. ECOLOGICAL INFORMATION

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

Styrene

Ecotoxicity - Fish Species Data:
96 h LC50 (Lepomis macrochirus) = 19.03 - 33.53 mg/L static
96 h LC50 (Pimephales promelas) = 3.24 - 4.99 mg/L flow-through
96 h LC50 (Poecilia reticulata) = 58.75 - 95.32 mg/L static
96 h LC50 (Pimephales promelas) = 6.75 - 14.5 mg/L static
Ecotoxicity - Water Flea Data:
48 h EC50 (Daphnia magna) = 3.3 - 7.4 mg/L
Ecotoxicity - Freshwater Algae Data:
96 h EC50 (Pseudokirchneriella subcapitata) = 0.15 - 3.2 mg/L static
72 h EC50 (Pseudokirchneriella subcapitata) = 0.46 - 4.3 mg/L static
96 h EC50 (Pseudokirchneriella subcapitata) = 0.72 mg/L
72 h EC50 (Pseudokirchneriella subcapitata) = 1.4 mg/L

Talc

Ecotoxicity - Fish Species Data:
96 h LC50 (Brachydanio rerio) = 100 g/L semi-static

Methyl Methacrylate Monomer

Ecotoxicity - Fish Species Data:
96 h LC50 (Pimephales promelas) = 125.5 - 190.7 mg/L static
96 h LC50 (Lepomis macrochirus) = 153.9 - 341.8 mg/L static
96 h LC50 (Lepomis macrochirus) = 170 - 206 mg/L flow-through
96 h LC50 (Pimephales promelas) = 243 - 275 mg/L flow-through
96 h LC50 (Poecilia reticulata) = 326.4 - 426.9 mg/L static
96 h LC50 (Oncorhynchus mykiss) = 79 mg/L flow-through
96 h LC50 (Oncorhynchus mykiss) = 79 mg/L static
Ecotoxicity - Water Flea Data:
48 h EC50 (Daphnia magna) = 69 mg/L
Ecotoxicity - Freshwater Algae Data:
96 h EC50 (Pseudokirchneriella subcapitata) = 170 mg/L

Silica

Ecotoxicity - Fish Species Data:
96 h LC50 (Brachydanio rerio) = 5000 mg/L static
Ecotoxicity - Water Flea Data:
48 h EC50 (Ceriodaphnia dubia) = 7600 mg/L
Ecotoxicity - Freshwater Algae Data:
72 h EC50 (Pseudokirchneriella subcapitata) = 440 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: UN1866
Proper shipping name: Resin solution (Contains Styrene Monomer, Inhibited)
U.S. DOT - Hazard Class: 3
Packing group: III
ERG No: 127

TDG (Canada)

Proper shipping name: Resin solution (Contains Styrene Monomer, Inhibited)

Packing group: III

15. REGULATORY INFORMATION

U.S. Regulations:

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

SARA 313:

Components	U.S. - CERCLA/SARA - Section 313 - Emission Reporting
Cobalt compounds (0.1 - 0.5%)	0.1 % de minimis concentration
Styrene (20 - 30%)	0.1 % de minimis concentration
Methyl Methacrylate Monomer (5 - 10%)	1.0 % 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	PARTK:
Cobalt compounds	Listed (PARTK)
Styrene	Listed (PARTK)
Methyl Methacrylate Monomer	Listed (PARTK)

Components	NJRTK:
Cobalt compounds	Listed (NJRTK)
Talc	Listed (NJRTK)
Styrene	Listed (NJRTK)
Methyl Methacrylate Monomer	Listed (NJRTK)
Xylene	Listed (NJRTK)
Silica	Listed (NJRTK)

Components	State Regulation - CA Prop65
Cobalt compounds	Carcinogen
Ethylbenzene	Carcinogen

Canadian WHMIS

WHMIS hazard class: D2A Very toxic materials B2 Flammable liquid

Canadian Ingredient Disclosure List (IDL):

Components	Canada - WHMIS Ingredient Disclosure:
1,2,4-trimethylbenzene	0.1
Cobalt compounds	0.1
Styrene	0.1
Methyl Methacrylate Monomer	1
Silica	1

International Inventories

TSCA 8(b):	Listed or exempt.
Canadian DSL/NDSL list	One or more ingredient(s) are not listed on the DSL or NDSL list.
EC-No.	Listed or exempt.
Philippines (PICCS):	One or more ingredient(s) are not on the PICCS list.
Japan (ENCS):	One or more ingredient(s) are not on the ENCS list.
Korea (KECL):	One or more ingredient(s) are not on the KECL list.
China (IECS):	One or more ingredient(s) are not on the IECS list.
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: LILLY-RAM CHEMICAL COMPANY, LLC.

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