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: GSLA LMM-6000 Aerosol Spray Can
CAS-No.: Mixture
Recommended use: Industrial Use Only
Product Code: 1130062
Date of Preparation: 06/01/2012

2. HAZARDS IDENTIFICATION

Emergency Overview
Warning
Flammable liquid and vapor. Vapors may travel to a source and flash back. Avoid contact with the skin and the eyes. Irritating to eyes. Harmful by inhalation and in contact with skin. Harmful if swallowed.

Color: Gray
Physical state: Liquid
Odor: Characteristic

	HMIS	NFPA 704
Health:	3	3
Flammability:	4	4
Physical Hazard:	1	1
PPE:	B	

Potential Health Effects

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

Eye contact: May cause severe eye irritation.

Skin contact: Extremely irritating to the skin. Prolonged skin contact may defat the skin and produce dermatitis.

Inhalation: Vapors extremely irritating to eyes and respiratory tract.

Ingestion: Harmful if swallowed.

Chronic toxicity: Chronic exposure to ethanol can cause developmental damage. Long-term exposure can also cause loss of appetite, weight loss, nervousness, memory loss, mental retardation and liver damage. Combined exposure to ethanol and certain other chemicals may result in increased toxic effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Weight %
Ethanol	64-17-5	30 - 40%
Petroleum gases, liquefied, sweetened	68476-86-8	20 - 30%
Methanol	67-56-1	1 - 5%
Methyl isobutyl ketone	108-10-1	0.1 - 0.5%
Vandadium Compound		10 - 20%
Silicate mineral		5 - 10%
Molybdenum Compound		20 - 30%
Proprietary Additive		1 - 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): 13(55°F) Method: PMCC

Suitable extinguishing media: Use dry chemical, CO2, water spray or 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. 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. 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: 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:
Remove all 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:
Keep containers tightly closed in a dry, cool and well-ventilated 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
Ethanol	1000 ppm TWA 1900 mg/m³ TWA	1000 ppm STEL

Components	OSHA	ACGIH
Methanol	200 ppm TWA 260 mg/m^3 TWA	Skin 250 ppm STEL 200 ppm TWA
Methyl isobutyl ketone	100 ppm TWA 410 mg/m^3 TWA	75 ppm STEL 20 ppm TWA
Silicate mineral	20 mppcf TWA	3 mg/m^3 TWA respirable fraction

Engineering measures: Provide appropriate exhaust ventilation at machinery and at places where dust 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.

Skin and body protection: Lightweight protective clothing. Remove and wash contaminated clothing before re-use. Keep working clothes separately.

Hand protection: Impervious gloves. Follow the recommendations given by the manufacturer of protective gloves.

Respiratory protection: In case of insufficient ventilation wear suitable respiratory equipment . Seek professional advice prior to respirator selection and use. NIOSH-approved respirators should be worn where engineering controls and work practices do not reduce exposure to or below the PEL.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Gray	**Physical state:**	Liquid
Odor:	Characteristic	**Molecular weight:**	No data available
Boiling point/range (°C):	77.8	**pH:**	3.0
Melting point/range (°C):	No data available	**Specific gravity (Water =1):**	1.4
Vapor pressure :	No data available	**Water solubility:**	Partly soluble
VOC content (%)	51.1		

10. STABILITY AND REACTIVITY

Stability: Stable at normal conditions.

Polymerization None under normal processing.

Hazardous decomposition products: Thermal decomposition can lead to release of irritating gases and vapors. Carbon oxides. Molybdenum trioxide.

Materials to avoid: Strong oxidizing agents. Reducing agents.

Conditions to avoid Heat, flames and sparks. Avoid elevated temperatures.

11. TOXICOLOGICAL INFORMATION

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

Carcinogenic Effects: The International Agency for Research on Cancer (IARC) has determined alcoholic beverages are carcinogenic to humans (Group 1) and the occurrence of malignant tumors of the oral cavity, pharynx, larynx, esophagus and liver is causally related to the consumption of alcoholic beverages in humans. Animal studies on ethanol do not provide sufficient indication of carcinogenicity.

Component information, if any, is listed below

Ethanol

LD50s and LC50s: Inhalation LC50 (Rat) = 124.7 mg/L
Oral LD50 (Rat) = 7060 mg/kg

OSHA - Select Carcinogens: Present

Ethanol

NTP:	Known Human Carcinogen
IARC - Group 1:	Listed

Methanol

LD50s and LC50s:	Dermal LD50 (Rabbit) = 15800 mg/kg Oral LD50 (Rat) = 5628 mg/kg Inhalation LC50 (Rat) = 64000 ppm Inhalation LC50 (Rat) = 83.2 mg/L

Methyl isobutyl ketone

LD50s and LC50s:	Oral LD50 (Rat) = 2080 mg/kg Inhalation LC50 (Rat) = 8.2 mg/L Dermal LD50 (Rabbit) = 16000 mg/kg
OSHA - Select Carcinogens:	Present
IARC - Group 2B:	Listed

Vandadium Compound

LD50s and LC50s:	Oral LD50 (Rat) = 98 mg/kg

Molybdenum Compound

LD50s and LC50s:	Oral LD50 (Rat) = 2689 mg/kg Dermal LD50 (Rat) = 2 g/kg Inhalation LC50 (Rat) = 5840 mg/m^3

Proprietary Additive

LD50s and LC50s:	Oral LD50 (Rat) = 10200 mg/kg

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.

Ethanol

Ecotoxicity - Fish Species Data:
96 h LC50 (Oncorhynchus mykiss) = 12.0 - 16.0 mL/L static
96 h LC50 (Pimephales promelas) = 13400 - 15100 mg/L flow-through
96 h LC50 (Pimephales promelas) = 100 mg/L static
Ecotoxicity - Water Flea Data:
48 h LC50 (Daphnia magna) = 9268 - 14221 mg/L
24 h EC50 (Daphnia magna) = 10800 mg/L
48 h EC50 (Daphnia magna) = 2 mg/L Static

Methanol

Ecotoxicity - Fish Species Data:
96 h LC50 (Lepomis macrochirus) = 13500 - 17600 mg/L flow-through
96 h LC50 (Oncorhynchus mykiss) = 18 - 20 mL/L static
96 h LC50 (Oncorhynchus mykiss) = 19500 - 20700 mg/L flow-through
96 h LC50 (Pimephales promelas) = 28200 mg/L flow-through
96 h LC50 (Pimephales promelas) = 100 mg/L static

Methyl isobutyl ketone

Ecotoxicity - Fish Species Data:
96 h LC50 (Pimephales promelas) = 496 - 514 mg/L flow-through
Ecotoxicity - Water Flea Data:
48 h EC50 (Daphnia magna) = 170 mg/L
Ecotoxicity - Freshwater Algae Data:
96 h EC50 (Pseudokirchneriella subcapitata) = 400 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.)

14. TRANSPORT INFORMATION

UN/ID No: UN1950
Proper shipping name: Aerosols
U.S. DOT - Hazard Class: 2.1

TDG (Canada)
Proper shipping name: Aerosols

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
Methanol (1 - 5%)	1.0 % de minimis concentration
Molybdenum Compound (20 - 30%)	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:
Methanol	Listed (PARTK)
Molybdenum Compound	Listed (PARTK)

Components	NJRTK:
Molybdenum Compound	Listed (NJRTK)
Methyl isobutyl ketone	Listed (NJRTK)
Ethyl Acetate	Listed (NJRTK)
Ethanol	Listed (NJRTK)
Methanol	Listed (NJRTK)
Silicate mineral	Listed (NJRTK)

Components	State Regulation - CA Prop65
Methyl isobutyl ketone	Carcinogen
Ethanol	Carcinogen Developmental Toxicity

Canadian WHMIS

WHMIS hazard class: B2 Flammable liquid D1B Toxic materials D2A Very toxic materials

Canadian Ingredient Disclosure List (IDL):

Components	Canada - WHMIS Ingredient Disclosure:
Molybdenum Compound	1
Ethanol	0.1
Methanol	1
Silicate mineral	1
Vanadium Compound	1

International Inventories

TSCA 8(b): Listed or exempt.
Canadian DSL/NDSL list All ingredient(s) are listed on the DSL or NDSL

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):	Listed.
China (IECS):	Listed.
Australia (AICS):	Listed.
New Zealand (NZIoC):	Listed.

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