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SAFETY DATA SHEET	Print Date: 05/17/2018
Valvoline™ Full Synthetic Moly Fortified Gray Grease ™ Trademark, Valvoline or its subsidiaries, registered in various countries VV986	MSDS Number: R0257033 Version: 1.1

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Valvoline™ Full Synthetic Moly Fortified Gray Grease
™ Trademark, Valvoline or its subsidiaries, registered in various countries

Product code : VV986

Company : Valvoline LLC
3499 Blazer Parkway
Lexington, KY 40509

United States of America

E-mail address : SDS@valvoline.com
Telephone : 1-800-TEAMVAL
Telefax :

Emergency telephone number : 1-800-VALVOLINE

2. HAZARDS IDENTIFICATION

GHS Classification

Skin irritation : Category 3

GHS-Labeling


Signal word : Warning

Hazard statements : H316 Causes mild skin irritation.

Precautionary statements : **Response:**
P332 + P313 If skin irritation occurs: Get medical advice/
attention.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

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Hazardous components

Chemical Name	CAS-No.	Concentration
ZINC COMPOUNDS	68649-42-3	>=1 - <5 %

4. FIRST AID MEASURES

General advice : First aid is not normally required. If symptoms develop, seek medical attention.

First aid measures for different exposure routes

In case of eye contact : Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.
Remove contact lenses.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off immediately with plenty of water.

If inhaled : Move to fresh air.
If symptoms persist, call a physician.
In case of shortness of breath, give oxygen.

If swallowed : Do not induce vomiting without medical advice.
Never give anything by mouth to an unconscious person.
Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed (new) : No symptoms known or expected.

Notes to physician (new) :

No hazards which require special first aid measures.


5. FIREFIGHTING MEASURES

Suitable extinguishing media : ABC powder
Carbon dioxide (CO₂)
Dry chemical
Water mist

Unsuitable extinguishing media : Halons

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Amines
carbon dioxide and carbon monoxide

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Hydrocarbons
hydrogen sulfide
oxides of sulfur, nitrogen and phosphorus
zinc oxide

- Specific extinguishing methods : Keep containers and surroundings cool with water spray. Prevent fire extinguishing water from contaminating surface water or the ground water system. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Large spills should be collected mechanically (remove by pumping) for disposal. Keep in suitable, closed containers for disposal.
- Additional advice : Comply with all applicable federal, state, and local regulations.


7. HANDLING AND STORAGE

Handling

- Technical measures : Normal measures for preventive fire protection.
- Advice on safe handling : Do not breathe vapours or spray mist. For personal protection see section 8. Avoid exceeding of the given occupational exposure limits (see section 8). Smoking, eating and drinking should be prohibited in the application area.
- Avoidance of contact : Bases
Strong oxidizing agents

Storage

- Conditions for safe storage : Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place.

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Containers which are opened must be carefully resealed and kept upright to prevent leakage.

- Materials to avoid : Bases, Strong oxidizing agents
- Advice on common storage : No special restrictions on storage with other products.
- Other data : Stable under recommended storage conditions.


8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value (Form of exposure)	Control parameters / Permissible concentration	Basis
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Inhalable fraction.)	10 mg/m ³	UY OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Respirable fraction.)	3 mg/m ³	UY OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Respirable fraction.)	3 mg/m ³	EC OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Inhalable fraction.)	10 mg/m ³	EC OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Inhalable fraction.)	10 mg/m ³	PY OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Respirable fraction.)	3 mg/m ³	PY OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Inhalable fraction.)	10 mg/m ³	CR OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Respirable fraction.)	3 mg/m ³	CR OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Respirable fraction.)		CR OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Inhalable fraction.)		CR OEL

US. ACGIH Threshold Limit Values

Components	CAS-No.	Value (Form of exposure)	Control parameters / Permissible	Basis

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			concentration	
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Respirable fraction.)	3 mg/m3	ACGIH
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Inhalable fraction.)	10 mg/m3	ACGIH

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below level of overexposure (from known, suspected or apparent adverse effects).

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Safety glasses with side-shields

Hand protection : Wear resistant gloves such as:

Material : polyvinyl alcohol

Skin and body protection : Wear as appropriate:
Safety shoes

Hygiene measures : Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : paste

Colour : dark grey

Odour : No data available

pH : No data available

Freezing point : 260 °C

Boiling point : 371 °C

Flash point : 218 °C

Upper explosion limit : No data available


Lower explosion limit : No data available

Vapour pressure : No data available

Density : 0.88 g/cm3 (15.6 °C)

Solubility(ies)

Water solubility : No data available

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Solubility in other solvents : No data available
Partition coefficient: n-octanol/water : No data available
Auto-ignition temperature : No data available
Thermal decomposition : No data available

10. STABILITY AND REACTIVITY

Possibility of hazardous reactions : No hazards to be specially mentioned.

Hazardous polymerisation does not occur.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Bases
Strong oxidizing agents

Hazardous decomposition products : carbon dioxide and carbon monoxide
Hydrocarbons

11. TOXICOLOGICAL INFORMATION


Product

Acute oral toxicity : No data available
Acute inhalation toxicity : No data available
Acute dermal toxicity : No data available
Skin corrosion/irritation : No data available
Serious eye damage/eye irritation : No data available
Respiratory or skin sensitisation : No data available

Components:

ZINC COMPOUNDS:

Acute oral toxicity : LD 50 Rat: 2,000 - 5,000 mg/kg

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Acute dermal toxicity : LD 50 Rabbit: > 2,000 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

No data available

Components:

No data available

Persistence and degradability

Product:

No data available

Components:

No data available

Bioaccumulative potential

Product:

No data available

Components:

No data available

Mobility in soil

Product:

No data available


Components:

No data available

Other adverse effects

Product:

Ozone-Depletion Potential : No data available

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Components:

No data available

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with the European Directives on waste and hazardous waste.

Dispose of in accordance with local regulations.

Contaminated packaging : Empty remaining contents.

DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

International transport regulations

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods


UN_DG

Not dangerous goods

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	no
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Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

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15. REGULATORY INFORMATION

Other international regulations

Notification status

US. Toxic Substances Control Act	: y (positive listing)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	: y (positive listing)
Australia. Industrial Chemical (Notification and Assessment) Act	: n (Negative listing)
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	: y (positive listing)
Japan. Kashin-Hou Law List	: n (Negative listing)
Korea. Toxic Chemical Control Law (TCCL) List	: n (Negative listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	: y (positive listing)
China. Inventory of Existing Chemical Substances	: y (positive listing)

16. OTHER INFORMATION

Further information

Other information : The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Valvoline's Environmental Health and Safety Department.

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"


IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

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ICxx : Inhibitory Concentration for xx of a substance
 Ecxx : Effective Concentration of xx
 N.O.S.: Not Otherwise Specified
 OECD : Organization for Economic Co-operation and Development
 OEL : Occupational Exposure Limit
 P-Statement : Precautionary Statement
 PBT : Persistent , Bioaccumulative and Toxic
 PPE : Personal Protective Equipment
 STEL : Short-term exposure limit
 STOT : Specific Target Organ Toxicity
 TLV : Threshold Limit Value
 TWA : Time-weighted average
 vPvB : Very Persistent and Very Bioaccumulative
 WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
 DOT : Department of Transportation
 FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
 HMIRC : Hazardous Materials Information Review Commission
 HMIS : Hazardous Materials Identification System
 NFPA : National Fire Protection Association
 NIOSH : National Institute for Occupational Safety and Health
 OSHA : Occupational Safety and Health Administration
 PMRA : Health Canada Pest Management Regulatory Agency
 RTK : Right to Know
 WHMIS : Workplace Hazardous Materials Information System