1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Valvoline™ Durablend™ SYNTHETIC BLEND GREASE

Product code : VV27910

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

Acute toxicity (Oral) : Category 5

GHS-Labelling

Signal word : Warning

Hazard statements : H303 May be harmful if swallowed.

Precautionary statements : **Response:**
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration
RESIDUAL OILS (PETROLEUM), SOLVENT-REFINED	64742-01-4	>=50 - <70 %
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0	>=30 - <50 %
MOLYBDENUM DISULFIDE	1317-33-5	>=1 - <10 %

4. FIRST AID MEASURES

General advice : No hazards which require special first aid measures.

First aid measures for different exposure routes

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
If eye irritation persists, consult a specialist.

In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.

If inhaled : If breathed in, move person into fresh air.
If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.

If swallowed : IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed (new) : Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
stomach or intestinal upset (nausea, vomiting, diarrhea)

irritation (nose, throat, airways)

Notes to physician (new) :

No hazards which require special first aid measures.

5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : High volume water jet

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

Hazardous combustion products :

carbon dioxide and carbon monoxide
Hydrocarbons

Specific extinguishing methods : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

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.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
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 : Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.

Avoidance of contact : Strong oxidizing agents

Storage

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : Strong oxidizing agents

Other data : No decomposition if stored and applied as directed.

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/m3	UY OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Respirable fraction.)	3 mg/m3	UY OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Respirable fraction.)	3 mg/m3	EC OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Inhalable fraction.)	10 mg/m3	EC OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Inhalable fraction.)	10 mg/m3	PY OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Respirable fraction.)	3 mg/m3	PY OEL

MOLYBDENUM DISULFIDE	1317-33-5	TWA (Inhalable fraction.)	10 mg/m3	CR OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Respirable fraction.)	3 mg/m3	CR OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Respirable fraction.)		CR OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Inhalable fraction.)		CR OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Respirable fraction.)	0.5 mg/m3	PE OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Respirable fraction.)		PE OEL
MOLYBDENUM DISULFIDE	1317-33-5	CMP (Respirable fraction.)	3 mg/m3	AR OEL
MOLYBDENUM DISULFIDE	1317-33-5	CMP (Inhalable fraction.)	10 mg/m3	AR OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Inhalable fraction.)		AR OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Respirable fraction.)		AR OEL
MOLYBDENUM DISULFIDE	1317-33-5	LPP	8 mg/m3	CL OEL
MOLYBDENUM DISULFIDE	1317-33-5	CAP (Inhalable fraction.)	10 mg/m3	VE OEL
MOLYBDENUM DISULFIDE	1317-33-5	CAP (Respirable fraction.)	3 mg/m3	VE OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Respirable fraction.)		VE OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Inhalable fraction.)		VE OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Respirable fraction.)		CO OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Inhalable fraction.)		CO OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Inhalable fraction.)	10 mg/m3	CO OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Respirable fraction.)	3 mg/m3	CO OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Respirable fraction.)		EC OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Inhalable fraction.)		EC OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Respirable fraction.)		UY OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Inhalable fraction.)		UY OEL

MOLYBDENUM DISULFIDE	1317-33-5	(Inhalable fraction.)		PY OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Respirable fraction.)		PY OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Respirable fraction.)	3 mg/m3	NI OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Inhalable fraction.)	10 mg/m3	NI OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Inhalable fraction.)		NI OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Respirable fraction.)		NI OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Respirable fraction.)	3 mg/m3	DO OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Inhalable fraction.)	10 mg/m3	DO OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Inhalable fraction.)		DO OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Respirable fraction.)		DO OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Inhalable fraction.)	10 mg/m3	PE OEL
MOLYBDENUM DISULFIDE	1317-33-5	TWA (Respirable fraction.)	3 mg/m3	PE OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Respirable fraction.)		PE OEL
MOLYBDENUM DISULFIDE	1317-33-5	(Inhalable fraction.)		PE OEL
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0	TWA (Inhalable fraction.)	5 mg/m3	PY OEL
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0	(Inhalable fraction.)		PY OEL

US. ACGIH Threshold Limit Values

Components	CAS-No.	Value (Form of exposure)	Control parameters / Permissible concentration	Basis
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 exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Eye protection	:	Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.
Material	:	polyvinyl alcohol
Hand protection	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Skin and body protection	:	Wear as appropriate: impervious clothing Safety shoes Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	:	Wash hands before breaks and at the end of workday. When using do not eat or drink. When using do not smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Odour	:	No data available
Odour Threshold	:	No data available
pH	:	No data available
Freezing point	:	No data available
Boiling point	:	338 °C
Flash point	:	220 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Self-ignitable	:	No data available
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	< 0.02 hPa (20 °C)
Relative vapour density	:	No data available
Density	:	0.94 g/cm3 (20 °C)

Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	> 315 °C
Thermal decomposition	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	> 20.5 mm2/s (40 °C)
Oxidizing properties	:	No data available

10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	Product will not undergo hazardous polymerization.
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	carbon dioxide and carbon monoxide Hydrocarbons
Thermal decomposition	:	No data available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation Skin contact Eye Contact Ingestion

Product

Acute oral toxicity	:	LD 50 Rat: 4,465 mg/kg Method: Acute toxicity estimate
Acute inhalation toxicity	:	No data available
Acute dermal toxicity	:	LD 50 Rabbit: 19,822 mg/kg

Method: Acute toxicity estimate

Skin corrosion/irritation	:	Result: Not irritating to skin
Serious eye damage/eye irritation	:	Result: Not irritating to eyes Unlikely to cause eye irritation or injury.
Respiratory or skin sensitisation	:	No data available
Further information	:	No data available

Components:

RESIDUAL OILS (PETROLEUM), SOLVENT-REFINED:

Acute oral toxicity	:	LD50 Rat: > 5,000 mg/kg Information given is based on data obtained from similar substances.
Acute inhalation toxicity	:	LC50 Rat: > 5.53 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 No mortality observed at this dose.
Acute dermal toxicity	:	LD50 Rat: > 5,000 mg/kg Method: OECD Test Guideline 402 No adverse effect has been observed in acute dermal toxicity tests.
Respiratory or skin sensitisation	:	Test Method: Buehler Test Species: Guinea pig Classification: Does not cause skin sensitisation. Method: OECD Test Guideline 406

Germ cell mutagenicity

Genotoxicity in vitro	:	Type: Ames test Test species: Salmonella typhimurium with and without metabolic activation Result: negative
Aspiration toxicity	:	No aspiration toxicity classification

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

Acute oral toxicity	:	LD 50 Rat: > 5,000 mg/kg
Acute dermal toxicity	:	LD 50 Rabbit: > 5,000 mg/kg

MOLYBDENUM DISULFIDE:

Acute oral toxicity	:	LD50 Rat: > 5,000 mg/kg
Acute inhalation toxicity	:	LC 50 Rat: > 2.82 mg/l Exposure time: 4 h Test atmosphere: dust/mist No adverse effect has been observed in acute inhalation toxicity tests.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

No data available

Components:

RESIDUAL OILS (PETROLEUM), SOLVENT-REFINED:

Toxicity to fish	:	LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l Exposure time: 96 h Test Method: static test Test substance: WAF Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Scud (Gammarus pulex)): > 10,000 mg/l Exposure time: 48 h Test Method: semi-static test Method: OECD Test Guideline 202
Toxicity to algae	:	NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l Exposure time: 72 h Test Method: static test Test substance: WAF Method: OECD Test Guideline 201

Persistence and degradability

Product:

No data available

Components:

RESIDUAL OILS (PETROLEUM), SOLVENT-REFINED:

Biodegradability	:	Result: Not readily biodegradable. Biodegradation: 2 - 4 % Exposure time: 28 d

Method: OECD Test Guideline 301B
Information given is based on data obtained from similar substances.

Bioaccumulative potential

Product:

Partition coefficient: n-octanol/water : 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

Additional ecological information : No data available

Components:

No data available

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

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

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.

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	:	y (positive listing)
Japan. ENCS - Existing and New Chemical Substances Inventory	:	n (Negative listing)
Korea. Toxic Chemical Control Law (TCCL) List	:	y (positive 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 SDS 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.
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