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Valvoline™ PALLADIUM™ #2 3% Moly Grease

Version: 1.8 Revision Date: 03/08/2021 Print Date: 07/22/2021

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ PALLADIUM™ #2 3% Moly Grease

Product code : VV70112

Details of the supplier of the safety data sheet

Valvoline LLC 100 Valvoline Way Lexington, KY 40509

United States of America (USA) 1-800-TEAMVAL (1-800-832-6825) Emergency telephone number

1-800-VALVOLINE (1-800-825-8654)

Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825)

Product Information

1-800-TEAMVAL (1-800-832-6825)

SDS@valvoline.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 91.6999 %

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC	64742-53-6	Asp. Tox. 1; H304	>=10.00 - < 15.00
NONANEDIOIC ACID, DILITHIUM SALT	38900-29-7	Acute Tox. 4; H302	>=5.00 - < 10.00



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2,5-BIS(OCTYLDITHIO)-1,3,4- THIADIAZOLE	13539-13-4	Acute Tox. 4; H332 Skin Irrit. 2; H315	>=0.10 - < 0.50
		Eye Irrit. 2A; H319 Skin Sens. 1; H317	
5,5'-dithiodi-1,3,4-thiadiazole-	72676-55-2		>=0.10 - < 0.50
2(3H)-thione		Skin Sens. 1; H317	

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

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

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.

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.

In case of eye contact : Protect unharmed eye.

Remove contact lenses.

If swallowed : 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

: No symptoms known or expected.

Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local

circumstances and the surrounding environment.

Water spray

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Foam

Carbon dioxide (CO2)

Dry chemical

Specific hazards during

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firefighting

: Do not allow run-off from fire fighting to enter drains or water

courses.

Hazardous combustion

products

: carbon dioxide and carbon monoxide

Specific extinguishing

methods

Product is compatible with standard fire-fighting agents.

Further information : Standard procedure for chemical fires.

Special protective equipment

for firefighters

: In the event of fire, wear self-contained breathing apparatus.

SECTION 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).

Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the

application area.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters



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Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC	64742-53-6	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable particulate matter	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures

: General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, 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

Respiratory protection : No personal respiratory protective equipment normally

required.

No personal respiratory protective equipment normally

required.

Eye protection : Not required under normal conditions of use. Wear splash-

proof safety goggles if material could be misted or splashed

into eyes.

Skin and body protection : Wear resistant gloves (consult your safety equipment

supplier). Safety shoes

Wear as appropriate:

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : paste

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Colour : grey

Odour : mild

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : $> 700 \, ^{\circ}\text{F} / > 371 \, ^{\circ}\text{C}$

Flash point : $> 399 \, ^{\circ}\text{F} / > 204 \, ^{\circ}\text{C}$

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Self-ignition : No data available

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapour pressure : < 1 mmHg (100.00 °F / 37.78 °C)

Relative vapour density : No data available

Relative density : No data available

Density : 0.9 g/cm3 (68 °F / 20 °C)

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-

octanol/water

: No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

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Viscosity, kinematic : > 1000 mm2/s (104 °F / 40 °C)

Oxidizing properties : No data available

SECTION 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.

Conditions to avoid : None known.

Incompatible materials : Oxidizing agents

Hazardous decomposition

products No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation Skin contact Eye Contact Ingestion

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: 592.87 mg/kg

Method: Calculation method

Assessment: The substance or mixture has no acute oral

toxicity

Components:

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC:

Acute oral toxicity : LD50 (Rat): > 5 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Assessment: Not classified as acutely toxic by dermal

absorption under GHS.

NONANEDIOIC ACID, DILITHIUM SALT:

Acute oral toxicity : LD50 (Rat, female): > 300 - < 2,000 mg/kg

Remarks: Information given is based on data obtained from



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similar substances.

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

Assessment: Not classified as acutely toxic by dermal

absorption under GHS.

Remarks: Information given is based on data obtained from

similar substances.

2,5-BIS(OCTYLDITHIO)-1,3,4-THIADIAZOLE:

Acute inhalation toxicity : Assessment: The component/mixture is classified as acute

inhalation toxicity, category 4.

5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

Assessment: Not classified as acutely toxic by ingestion under

GHS.

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Assessment: Not classified as acutely toxic by dermal

absorption under GHS.

Skin corrosion/irritation

Not classified based on available information.

Product:

Result : Repeated exposure may cause skin dryness or cracking.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC:

Assessment : No skin irritation Result : No skin irritation

NONANEDIOIC ACID, DILITHIUM SALT:

Method : Regulation (EC) No. 440/2008, Annex, B.40

Result : No skin irritation

2,5-BIS(OCTYLDITHIO)-1,3,4-THIADIAZOLE:Result : Irritating to skin.

5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione:

Species : Rabbit

Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks : Unlikely to cause eye irritation or injury.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC:

Result : Slight, transient irritation



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Assessment : Slight, transient irritation

NONANEDIOIC ACID, DILITHIUM SALT: Species : Rabbit

Result : Slight, transient irritation

2,5-BIS(OCTYLDITHIO)-1,3,4-THIADIAZOLE:Result : Irritating to eyes.

5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione:Species : Rabbit

Result : Slight, transient irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Product:

Assessment : Does not cause skin sensitisation.

Components:

NONANEDIOIC ACID, DILITHIUM SALT:

Test Type : Local lymph node assay

Assessment : Does not cause skin sensitisation.

Method : OECD Test Guideline 429

2,5-BIS(OCTYLDITHIO)-1,3,4-THIADIAZOLE:

Assessment : May cause sensitisation by skin contact.

5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione:

Test Type : Local lymph node assay

Assessment : May cause sensitisation by skin contact.

Method : OECD Test Guideline 429

Germ cell mutagenicity

Not classified based on available information.

Components:

NONANEDIOIC ACID, DILITHIUM SALT:

Genotoxicity in vitro : Test Type: Ames test

Metabolic activation: with and without metabolic activation

Result: negative

5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione:

Genotoxicity in vitro : Test Type: Ames test

Metabolic activation: with and without metabolic activation

Result: negative

Carcinogenicity

Not classified based on available information.



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Components:

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation

Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is

identified as probable, possible or confirmed human carcinogen by IARC.

OSHANo component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is

identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Short-term (acute) aquatic

hazard

: Not classified based on available information.

Long-term (chronic) aquatic

hazard

: Not classified based on available information.

Components:

NONANEDIOIC ACID, DILITHIUM SALT:

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): > 100 mg/l

Exposure time: 96 h Test Type: static test

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 100 mg/l

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aquatic invertebrates Exposure time: 48 h

Test Type: static test

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 23 mg/l

End point: Growth inhibition

Exposure time: 72 h Test Type: static test

5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione:

Toxicity to fish : EC50 (Pimephales promelas (fathead minnow)): > 454 mg/l

Exposure time: 96 h Test Type: semi-static test

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 3 mg/l

Exposure time: 48 h Test Type: static test

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 20 mg/l

End point: Growth inhibition

Exposure time: 72 h Test Type: static test

Persistence and degradability

NONANEDIOIC ACID, DILITHIUM SALT:

Biodegradability : Result: Readily biodegradable.

Remarks: Information given is based on data obtained from

similar substances.

5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 0 % Exposure time: 28 d

Method: OECD Test Guideline 301B

No data available

Bioaccumulative potential

NONANEDIOIC ACID, DILITHIUM SALT:
Partition coefficient: n- : log Pow: -3.5

octanol/water

No data available

Mobility in soil

No data available

Other adverse effects
No data available

Product:

Additional ecological

information

: No data available



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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : Dispose of in accordance with all applicable local, state and

federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

CFR ROAD

Not regulated as a dangerous good

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.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : No SARA Hazards

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SARA 313 : This material does not contain any chemical components with

known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

The components of this product are reported in the following inventories:

TSCA : On TSCA Inventory

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : Not in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

PICCS : Not in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

nventories

AICS (Australia), AIIC (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

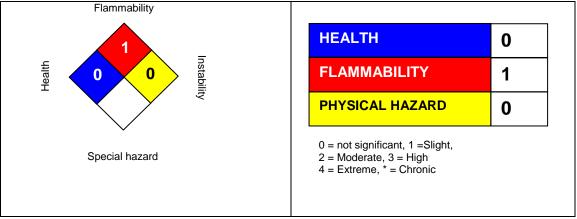
Internal information: R0211744

NFPA:	HMIS III:



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NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

Sources of key data used to compile the Safety Data Sheet Valvoline internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

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 (1-800-VALVOLINE).

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.

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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