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

Product name : Valvoline™ POWER STEERING FLUID

Product code : 602241

Company : Niteo Products, LLC
United States of America
Dallas TX 75219

P.O. Box 191629

制造商或供应商名称 : Niteo Products, LLC
美国
Dallas TX 75219

P.O. Box 191629

E-mail address :

Telephone : 1-844-696-4836

Telefax :


Emergency telephone number : CHEMTREC DIRECT 1-800-424-9300

Use of the substance/mixture :

2. HAZARDS IDENTIFICATION

GHS-Classification

Hazard classification : Reproductive toxicity, Category 2
Suspected of damaging fertility or the unborn child.
Acute aquatic toxicity, Category 3
Harmful to aquatic life.
Chronic aquatic toxicity, Category 3
Harmful to aquatic life with long lasting effects.

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GHS-Labeling

Symbol(s)

:



Signal word

: Warning

Hazard statements

: H412

Harmful to aquatic life with long lasting effects.

Precautionary statements

: **Prevention:**

P201

Obtain special instructions before use.

P202

Do not handle until all safety precautions have been read and understood.

P273

Avoid release to the environment.

P280

Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P308 + P313

IF exposed or concerned: Get medical advice/ attention.

Storage:

P405

Store locked up.

Disposal:

P501

Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

No information available.


3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture

: Mixture

Hazardous components

Chemical name	CAS-No.	Concentration
PETROLEUM DISTILLATES	64742-55-8	>=10 - <20 %
PHOSPHATE	1330-78-5	>=0.1 - <1 %
PHOSPHATE	25155-23-1	<0.1 %


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4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Call a POISON CENTRE or doctor/physician if exposed or you feel unwell.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- 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 : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
If eye irritation persists, consult a specialist.
- If swallowed : Obtain medical attention.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

Notes to physician

- Symptoms :
- 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)
- Risks : 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

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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.

Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

Treatment :


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 (CO ₂)
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. |
| Special protective equipment for firefighters | : | In the event of fire, wear self-contained breathing apparatus. |
| Further information | : | Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |

6. ACCIDENTAL RELEASE MEASURES

- | | | |
|----------------------|---|---|
| Personal precautions | : | Ensure adequate ventilation.
Persons not wearing protective equipment should be excluded |
|----------------------|---|---|

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from area of spill until clean-up has been completed.

- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods for 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

- Advice on safe handling : Do not breathe vapours/dust.
Do not smoke.
Container hazardous when empty.
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.
- Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Storage

- Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
- Materials to avoid : Strong oxidizing agents
- Other data : No decomposition if stored and applied as directed.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
PHOSPHATE	1330-78-5	PC-TWA	0.3 mg/m ³	2002	CN OEL

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

- Hand protection : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- 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 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.


9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

- Physical state : liquid
- Colour : No data available
- Odour : No data available
- Odour Threshold : No data available

Safety data

- Flash point : > 199 °C Method: Cleveland open cup
- Ignition temperature : No data available
- Lower explosion limit : No data available
- Upper explosion limit : No data available

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Flammability (solid, gas)	: No data available
Oxidizing properties	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Molecular weight	: No data available
pH	: No data available
Melting point/freezing point	: No data available
Boiling point	: No data available
Sublimation point	: No data available
Vapour pressure	: 1.33 hPa Calculated Vapor Pressure
Density	: No data available
Bulk density	: No data available
Water solubility	: Note: No data available
Partition coefficient: n-octanol/water	: Note: No data available
Solubility in other solvents	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: 42 mm ² /s at 40 °C
Flow time	: No data available
Impact sensitivity	: No data available
Relative vapour density	: No data available
Surface tension	: No data available
Evaporation rate	: No data available

10. STABILITY AND REACTIVITY

Conditions to avoid	: excessive heat
Materials to avoid	: Strong oxidizing agents
Hazardous decomposition products	: carbon dioxide and carbon monoxide Hydrocarbons
Thermal decomposition	: Remarks: No data available
Hazardous reactions	: Product will not undergo hazardous polymerization.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	: Inhalation Skin contact Eye Contact Ingestion
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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	: Unlikely to cause eye irritation or injury.
Respiratory or skin sensitisation	: No data available
Further information	: No data available

Components:

PHOSPHATE:

Acute oral toxicity	: LD50 Rat, male and female: > 20,000 mg/kg
Acute inhalation toxicity	: LC50 Rat, male and female: > 11.1 mg/l Exposure time: 1 h Test atmosphere: dust/mist The component/mixture is classified as acute inhalation toxicity, category 5. No mortality observed at this dose.
Acute dermal toxicity	: LD50 Rabbit, male and female: 3,700 mg/kg
Respiratory or skin sensitisation	: Test Method: Local lymph node assay Species: Mouse Classification: Does not cause skin sensitisation. Method: OECD Test Guideline 429 GLP: yes
Germ cell mutagenicity	
Genotoxicity in vitro	: Type: Chromosome aberration test in vitro Test species: Chinese hamster lung cells with and without metabolic activation Result: negative Method: OECD Test Guideline 473 (In vitro Mammalian

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Chromosome Aberration Test)
GLP: yes

: Type: Ames test
Test species: Salmonella typhimurium
with and without metabolic activation
Result: negative
Method: OECD Test Guideline 471
GLP: no

Reproductive toxicity -
Assessment : Some evidence of adverse effects on sexual function and fertility,
based on animal experiments.

PHOSPHATE:

Acute oral toxicity : LD50 Rat: > 5,000 mg/kg

Acute dermal toxicity : LD50 Rabbit: > 2,000 mg/kg
No adverse effect has been observed in acute dermal toxicity
tests.

Respiratory or skin sensitisation : Classification: Does not cause skin sensitisation.

Germ cell mutagenicity


Genotoxicity in vitro : Type: Ames test
Test species: Salmonella typhimurium
with and without metabolic activation
Result: negative

Reproductive toxicity -
Assessment : Clear evidence of adverse effects on sexual function and fertility,
based on animal experiments.

STOT - repeated exposure : Exposure routes: Ingestion
Target Organs: Testes
Assessment: The substance or mixture is classified as specific
target organ toxicant, repeated exposure, category 2.

Exposure routes: Ingestion
Target Organs: female reproductive organs
Assessment: The substance or mixture is classified as specific
target organ toxicant, repeated exposure, category 2.

Exposure routes: Ingestion

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Target Organs: Adrenal gland
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Exposure routes: Ingestion
Target Organs: Liver
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

12. ECOLOGICAL INFORMATION

Ecotoxicity


Product:

No data available

Components:

PHOSPHATE:

- | | | |
|---|---|--|
| Toxicity to fish | : | LC50 (Rainbow darter (<i>Etheostoma caeruleum</i>)): 0.6 mg/l
Exposure time: 96 h
Test Method: static test |
| Toxicity to daphnia and other aquatic invertebrates | : | (<i>Daphnia magna</i> (Water flea)): 0.146 mg/l
Test Method: Immobilization
Method: OECD Test Guideline 202
GLP: yes |
| Toxicity to algae | : | ErC50 (<i>Pseudokirchneriella subcapitata</i> (microalgae)): > 2.5 mg/l
Exposure time: 72 h
Test Method: Growth inhibition
Method: OECD Test Guideline 201
GLP: yes |
| M-Factor | : | 1 |
| Toxicity to bacteria | : | EC 50 (activated sludge): > 1,000 mg/l
Exposure time: 3 h
Test Method: Respiration inhibition
Method: OECD Test Guideline 209
GLP: yes |
| Toxicity to fish (Chronic toxicity) | : | 0.9 mg/l
Exposure time: 28 d |

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Species: Oncorhynchus mykiss (rainbow trout)

Ecotoxicology Assessment

- Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.
- :
- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 1.119 mg/l
Exposure time: 96 h
Test Method: flow-through test
Method: OECD Test Guideline 203
No toxicity at the limit of solubility
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.06 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
- NOEC (Daphnia magna (Water flea)): 0.011 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
- Toxicity to algae : NOEC (Pseudokirchneriella subcapitata (green algae)): 0.233 mg/l
Exposure time: 72 h
Test Method: static test
Method: OECD Test Guideline 201
No toxicity at the limit of solubility
- M-Factor : 10

Persistence and degradability


Product:

No data available

Components:

PHOSPHATE:

- Biodegradability : Result: Readily biodegradable
Biodegradation: 80 %
Exposure time: 28 d
Method: OECD Test Guideline 301C
GLP: yes
- :
- Biodegradability : Result: Not readily biodegradable.

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Biodegradation: 14 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Bioaccumulative potential

Product:

Partition coefficient: n-octanol/water : No data available

Components:

PHOSPHATE:

Bioaccumulation : Species: Fathead minnow (*Pimephales promelas*)
Exposure time: 32 d
Concentration: 0.0316 mg/l
Bioconcentration factor (BCF): 165
Method: Flow through

Partition coefficient: n-octanol/water : log Pow: 5.93

:

Partition coefficient: n-octanol/water : log Pow: > 6.2

Mobility in soil

Product:

No data available

Components:

No data available

Other adverse effects


Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

CN HW China. National Catalogue of Hazardous Wastes : Hazardous waste
PETROLEUM DISTILLATES

Product : The product should not be allowed to enter drains, water

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courses or the soil.
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.

Nature of the waste : Hazardous waste

14. TRANSPORT INFORMATION

REGULATION

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

CN_DG

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER


Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods	MARINE POLLUTANT: (TRICRESYL PHOSPHATE, TRI-ORTHO-CRESYL PHOSPHATE)
---------------------	---

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	yes
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15. REGULATORY INFORMATION

Further information

Regulations on the Control over Safety of Dangerous Chemicals
(Decree No. 591 of the State Council of the People's Republic of China)

List of dangerous goods GB12268-2005
Classification and code of dangerous goods (GB6944-2005)
General rules for preparation of chemical safety data sheet (GB16483-2008)
Classification and labels of dangerous chemical substances commonly used (GB13690-2009)
Law on Prevention and Control of Environment Pollution by Solid Waste
Regulation on the Safety Management of Hazardous Chemicals
Provisions on the Safe Use of Chemicals at Workplace
GB13690: General rule for classification and hazard communication of chemicals
Law on the Prevention and Control of Occupational Diseases

16. OTHER INFORMATION

Further information - Company

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

AU OEL : Australia. Workplace Exposure Standards for Airborne Contaminants.
 CN OEL : China. Occupational Exposure Limits
 HK OEL : Hong Kong. Code of Practice on Control of Air Impurities (Chemical Substances) in the Workplace
 IN OEL : India. Permissible levels of certain chemical substances in work environment.
 ID OEL : Indonesia. Occupational Exposure Limits
 JPJSOH OEL : Japan. The Japan Society for Occupational Health. Recommendation of Occupational Exposure Limits
 JPISHL OEL : Japan. Administrative Control Levels
 KOR OEL : Korea. Occupational Exposure Limits
 MY OEL : Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health)
 NZ OEL : New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
 PH OEL : Philippines. Threshold Limit Values For Airborne Contaminants
 SG OEL : Singapore. Workplace Safety and Health Act - First Schedule Permissible Exposure Limits of Toxic Substances
 TW OEL : Taiwan. Standards on the Concentration Levels of Hazardous Substances in the Air at Workplace
 TH OEL : Thailand. Occupational Exposure Limits
 VN OEL : Vietnam. Occupational Exposure Limits