



SAFETY DATA SHEET
ZEREX™ Heavy Duty Extended Life Antifreeze
Coolant

Version: 3.0

Revision Date: 06/29/2023

Print Date:
04/13/2025

SECTION 1. IDENTIFICATION

Product name : ZEREX™ Heavy Duty Extended Life Antifreeze Coolant

Product code : ZXED1

Manufacturer or supplier's details

Company name of supplier : Valvoline Global Operations

Address : 100 Valvoline Way
Lexington, KY 40509
United States of America (USA)

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

E-mail address : SDS@valvolineglobal.com

Emergency telephone number : +1-800-VALVOLUME (+1-800-825-8654)

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity (Oral) : Category 4

Skin irritation : Category 2

Eye irritation : Category 2A

Carcinogenicity : Category 1B

Specific target organ toxicity : Category 2 (Kidney, Liver)
- repeated exposure (Oral)

GHS label elements

Hazard pictograms : The image shows two GHS hazard pictograms side-by-side. The first is a red diamond with a black silhouette of a person with a starburst on their chest, representing 'Health Hazard'. The second is a red diamond with a black exclamation mark, representing 'Irritant'.

Signal word : Danger

Hazard statements : H302 Harmful if swallowed.
H315 Causes skin irritation.



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H319 Causes serious eye irritation.
H350 May cause cancer.
H373 May cause damage to organs (Kidney, Liver) through prolonged or repeated exposure if swallowed.

Precautionary statements

:

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist or vapours.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
ETHYLENE GLYCOL	107-21-1	>= 90 - <= 100



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POTASSIUM HYDROXIDE	1310-58-3	$\geq 1.5 - < 5$
SODIUM NITRITE	7632-00-0	$\geq 0.1 - < 0.5$
SODIUM NITRATE	7631-99-4	$\geq 0.1 - < 0.5$

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do NOT induce vomiting.
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 : Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.
May cause cancer.
May cause damage to organs through prolonged or repeated exposure if swallowed.
No symptoms known or expected.
- Notes to physician : Treat symptomatically.
No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- 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 : No hazardous combustion products are known



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- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
- 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 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.

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Do not breathe vapours/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : 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. Electrical installations / working materials must comply with the technological safety standards.
- Further information on storage stability : No decomposition if stored and applied as directed.

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
ETHYLENE GLYCOL	107-21-1	TWA (Vapour)	25 ppm	ACGIH
		STEL (Vapour)	50 ppm	ACGIH
		STEL (Inhalable fraction, Aerosol only)	10 mg/m3	ACGIH
		C	50 ppm 125 mg/m3	OSHA P0
POTASSIUM HYDROXIDE	1310-58-3	C	2 mg/m3	ACGIH
		C	2 mg/m3	NIOSH REL
		C	2 mg/m3	OSHA P0

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection

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

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : red

Odour : No data available

Odour Threshold : No data available

pH : Average 9.2

Melting point/freezing point : No data available



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Boiling point/boiling range	:	330 °F / 166 °C (1013 hPa)
Flash point	:	> 250 °F / > 121 °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	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	1.126 g/cm ³ (60.1 °F / 15.6 °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
Viscosity, kinematic	:	No data available
Oxidizing properties	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous	:	No decomposition if stored and applied as directed.



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reactions	:	
Conditions to avoid	:	excessive heat Exposure to moisture
Incompatible materials	:	Acids Alcohols Aldehydes Alkali metals Alkaline earth metals aluminum Amines Bases chlorinated solvents Fluorine Hydrogen fluoride lithium strong alkalis Strong oxidizing agents Sulphur compounds Zinc
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed.

Product:

Acute oral toxicity : Acute toxicity estimate: 513.2 mg/kg
Method: Calculation method

Components:

ETHYLENE GLYCOL:

Acute oral toxicity : LD0 (Human): estimated 1.56 g/kg

Assessment: The component/mixture is moderately toxic after single ingestion.

Acute inhalation toxicity : LC50 (Rat): 10.9 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): 9,530 mg/kg

Acute toxicity (other routes of : LD50 (Rat): 5,010 mg/kg



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administration)

Application Route: Intraperitoneal

LD50 (Rat): 3,260 mg/kg

Application Route: Intravenous

POTASSIUM HYDROXIDE:

Acute oral toxicity : LD50 (Rat): 333 mg/kg

SODIUM NITRITE:

Acute oral toxicity : LD50 (Rat): 180 mg/kg

Acute inhalation toxicity : LC50 (Rat): 5.5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

SODIUM NITRATE:

Acute oral toxicity : LD50 (Rat): ca. 3,430 mg/kg
Method: OECD Test Guideline 401

Skin corrosion/irritation

Causes skin irritation.

Product:

Remarks : May cause skin irritation in susceptible persons.

Components:

ETHYLENE GLYCOL:

Species : Rabbit
Result : No skin irritation

POTASSIUM HYDROXIDE:

Species : Rabbit
Result : Corrosive after 3 minutes or less of exposure

SODIUM NITRITE:

Assessment : No skin irritation
Result : No skin irritation

SODIUM NITRATE:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation



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Remarks : The toxicological data has been taken from products of similar composition.

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks : May cause irreversible eye damage.

Components:

ETHYLENE GLYCOL:

Result : Slight, transient irritation

POTASSIUM HYDROXIDE:

Species : Rabbit
Result : Corrosive

SODIUM NITRITE:

Result : Irritating to eyes.
Assessment : Irritating to eyes.

SODIUM NITRATE:

Species : Rabbit
Result : Irritating to eyes.
Method : OECD Test Guideline 405

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

ETHYLENE GLYCOL:

Test Type : Maximisation Test
Species : Guinea pig
Assessment : Does not cause skin sensitisation.

POTASSIUM HYDROXIDE:

Test Type : Maximisation Test
Species : Guinea pig



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Assessment : Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Components:

ETHYLENE GLYCOL:

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

Carcinogenicity

May cause cancer.

IARC Group 2A: Probably carcinogenic to humans
SODIUM NITRITE 7632-00-0
(nitrite (ingested) under conditions that result in endogenous nitrosation)
Group 2A: Probably carcinogenic to humans
SODIUM NITRATE 7631-99-4
(nitrate (ingested) under conditions that result in endogenous nitrosation)

OSHA No 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

May cause damage to organs (Kidney, Liver) through prolonged or repeated exposure if swallowed.

Components:

ETHYLENE GLYCOL:

Exposure routes : Ingestion
Target Organs : Kidney, Liver
Assessment : May cause damage to organs through prolonged or repeated exposure.



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Aspiration toxicity

Not classified based on available information.

Experience with human exposure

Components:

ETHYLENE GLYCOL:

Ingestion : Target Organs: Kidney

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 3; Harmful to aquatic life.

Chronic aquatic toxicity : Not classified based on available information.

Components:

ETHYLENE GLYCOL:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 27,540 mg/l
Exposure time: 96 h
Test Type: static test

LC50 (Pimephales promelas (fathead minnow)): 8,050 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 6,500 - 13,000 mg/l
End point: Growth inhibition
Exposure time: 7 Days

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 32,000 mg/l
Exposure time: 7 d



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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 24,000 mg/l
Exposure time: 7 d

Ecotoxicology Assessment

Acute aquatic toxicity : Not classified based on available information.

Chronic aquatic toxicity : Not classified based on available information.

POTASSIUM HYDROXIDE:

Toxicity to fish : LC50 (Gambusia affinis (Mosquito fish)): 80 mg/l
Exposure time: 96 h
Test Type: static test

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 3; Harmful to aquatic life.

Chronic aquatic toxicity : Not expected to cause long-term toxicity to fish., Not expected to cause long-term toxicity to aquatic invertebrates., Not expected to cause long-term toxicity to aquatic plants.

Chronic aquatic toxicity Category 3; Harmful to aquatic life with long lasting effects.

SODIUM NITRITE:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 2.35 - 3.81 mg/l
Exposure time: 96 h
Test Type: flow-through test

LC50 (Oncorhynchus mykiss (rainbow trout)): 0.54 - 26.3 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 15.4 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h
Test Type: Growth inhibition
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOEC (Ictalurus catus (catfish)): 6.16 mg/l
Exposure time: 31 d



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Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 9.86 mg/l
Exposure time: 80 d
Test Type: static test

Toxicity to microorganisms : EC10 (activated sludge): 210 mg/l
Exposure time: 3 h
Test Type: Static
Method: OECD Test Guideline 209

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 1; Very toxic to aquatic life.

Chronic aquatic toxicity : Not classified based on available information.

SODIUM NITRATE:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1,355 - 2,063 mg/l
Exposure time: 96 h
Method: Static
Remarks: Mortality

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 3,581 mg/l
Exposure time: 48 h
Method: Static

LC50 (Daphnia magna (Water flea)): 665 mg/l
Exposure time: 96 h
Method: Static

Ecotoxicology Assessment

Acute aquatic toxicity : Not classified based on available information.

Chronic aquatic toxicity : Not classified based on available information.

Persistence and degradability

Components:

ETHYLENE GLYCOL:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 90 - 100 %
Exposure time: 10 d
Method: OECD Test Guideline 301



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Bioaccumulative potential

Components:

ETHYLENE GLYCOL:

Bioaccumulation : Species: Crayfish (Procambarus)
Bioconcentration factor (BCF): 0.27
Exposure time: 61 d
Concentration: 1000 mg/l
Method: Flow through

Partition coefficient: n-octanol/water : log Pow: -1.36

SODIUM NITRITE:

Partition coefficient: n-octanol/water : log Pow: -3.700 (77 °F / 25 °C)

Mobility in soil

Components:

SODIUM NITRITE:

Stability in soil : Remarks: Not expected to adsorb on soil.

Other adverse effects

Product:

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82
Protection of Stratospheric Ozone - CAA Section 602 Class I
Substances
Remarks: This product neither contains, nor was
manufactured with a Class I or Class II ODS as defined by the
U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A +
B).

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

Global warming potential

**Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) of the
United Nations Framework Convention on Climate Change (UNFCCC)**

Components:

OCTAMETHYLCYCLOTETRASILOXANE:

20-year global warming potential: 2.66
100-year global warming potential: 0.739



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500-year global warming potential: 0.211
Atmospheric lifetime: 0.027 yr
Radiative efficiency: 0.12 Wm²ppb
Further information: Miscellaneous compounds

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water 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.
Do not re-use empty containers.

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

49 CFR

Not regulated as a dangerous good

Special precautions for user

Not applicable

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

CERCLA Reportable Quantity



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Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
METHANOL	67-56-1	100	100 (F003)
TOLUENE	108-88-3	100	100 (F005)

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 : Acute toxicity (any route of exposure)
Carcinogenicity
Specific target organ toxicity (single or repeated exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

ETHYLENE 107-21-1 >= 90 - <= 100 %
GLYCOL

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

ETHYLENE GLYCOL 107-21-1 >= 90 - <= 100 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

ETHYLENE GLYCOL 107-21-1 >= 90 - <= 100 %

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

POTASSIUM 1310-58-3 >= 1 - < 5 %
HYDROXIDE
ADIPIIC ACID 124-04-9 >= 0.1 - < 1 %
SODIUM NITRITE 7632-00-0 >= 0.1 - < 1 %
SODIUM HYDROXIDE 1310-73-2 >= 0 - < 0.1 %
TOLUENE 108-88-3 >= 0 - < 0.1 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

POTASSIUM 1310-58-3 >= 1 - < 5 %
HYDROXIDE
ADIPIIC ACID 124-04-9 >= 0.1 - < 1 %



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SODIUM NITRITE	7632-00-0	>= 0.1 - < 1 %
SODIUM HYDROXIDE	1310-73-2	>= 0 - < 0.1 %
TOLUENE	108-88-3	>= 0 - < 0.1 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know

ETHYLENE GLYCOL	107-21-1
POTASSIUM HYDROXIDE	1310-58-3

Pennsylvania Right To Know

ETHYLENE GLYCOL	107-21-1
POTASSIUM HYDROXIDE	1310-58-3
ADIPIC ACID	124-04-9
SODIUM NITRITE	7632-00-0
SODIUM HYDROXIDE	1310-73-2

Maine Chemicals of High Concern

WATER	7732-18-5
TOLUENE	108-88-3
OCTAMETHYLCYCLOTETRASILOXANE	556-67-2
NICKEL	7440-02-0

Vermont Chemicals of High Concern

ETHYLENE GLYCOL	107-21-1
WATER	7732-18-5
SODIUM MOLYBDATE	7631-95-0
TOLUENE	108-88-3
OCTAMETHYLCYCLOTETRASILOXANE	556-67-2
COBALT	7440-48-4

Washington Chemicals of High Concern

ETHYLENE GLYCOL	107-21-1
WATER	7732-18-5
TOLUENE	108-88-3
COBALT	7440-48-4

California Prop. 65

WARNING: This product can expose you to chemicals including ETHYLENE GLYCOL, TOLUENE, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California List of Hazardous Substances

ETHYLENE GLYCOL	107-21-1
POTASSIUM HYDROXIDE	1310-58-3

California Permissible Exposure Limits for Chemical Contaminants

ETHYLENE GLYCOL	107-21-1
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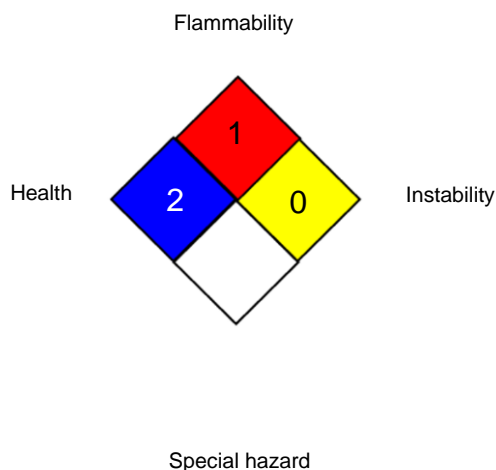
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NFPA 704:



HMIS® IV:

HEALTH	*	2
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

- ACGIH : USA. ACGIH Threshold Limit Values (TLV)
- NIOSH REL : USA. NIOSH Recommended Exposure Limits
- OSHA P0 : USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
- ACGIH / TWA : 8-hour, time-weighted average
- ACGIH / STEL : Short-term exposure limit
- ACGIH / C : Ceiling limit
- NIOSH REL / C : Ceiling value not be exceeded at any time.
- OSHA P0 / C : Ceiling limit

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -



Valvoline[™]

Global

SAFETY DATA SHEET
ZEREX[™] Heavy Duty Extended Life Antifreeze
Coolant

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Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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).

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN

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