



SAFETY DATA SHEET
ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

Print Date:
05/28/2022

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : ZEREX™ G-48® Formula 50/50 Antifreeze Coolant
Product code : 859537

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)

SDS@valvoline.com

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)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) : Category 4
Reproductive toxicity : Category 1B
Specific target organ toxicity
- repeated exposure (Oral) : Category 2 (Kidney, Liver)

GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Harmful if swallowed.
May damage fertility or the unborn child.
May cause damage to organs (Kidney, Liver) through
prolonged or repeated exposure if swallowed.

Precautionary Statements : **Prevention:**



SAFETY DATA SHEET
ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

Print Date:
05/28/2022

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe mist or vapors.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
IF exposed or concerned: Get medical advice/ attention.
Storage:
Store locked up.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
ETHYLENE GLYCOL	107-21-1	Acute Tox. 4; H302 STOT RE 2; H373	>=40.00 - < 50.00
2-ETHYLHEXANOIC ACID, SODIUM SALT	19766-89-3	Repr. 2; H361	>=1.50 - < 5.00
SODIUM BORATE DECAHYDRATE	1303-96-4	Eye Irrit. 2A; H319 Repr. 1B; H360	>=0.10 - < 0.50

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.



SAFETY DATA SHEET
ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

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05/28/2022

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- | | |
|---|--|
| If inhaled | : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician. |
| In case of eye contact | : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist. |
| If swallowed | : Induce vomiting immediately and call a physician.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital. |
| Most important symptoms and effects, both acute and delayed | : Effects of acute ethylene glycol poisoning appear in three fairly distinct stages. The initial stage occurs shortly after exposure, lasts 6-12 hours, and is characterized by central nervous system effects (transient exhilaration, nausea, vomiting, and in severe cases, coma, convulsions, and possible death). The second stage lasts from 12-36 hours after exposure and is initiated by the onset of coma. This phase is characterized by tachypnea, tachycardia, mild hypotension, cyanosis, and in severe cases, pulmonary edema, bronchopneumonia, cardiac enlargement, and congestive failure. The final stage occurs 24-72 post-exposure and is characterized by renal failure, ranging from a mild increase in blood urea nitrogen and creatinine followed by recovery, to complete anuria with acute tubular necrosis that can lead to death. Oxaluria is found in most cases. The most significant laboratory finding in ethylene glycol intoxication is severe metabolic acidosis.
No symptoms known or expected.
Harmful if swallowed.
May damage fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure if swallowed. |
| Notes to physician | : This product contains ethylene glycol. Ethanol decreases the metabolism of ethylene glycol to toxic metabolites. Ethanol should be administered as soon as possible in cases of severe poisoning since the elimination half-life of ethylene glycol is 3 hours. If medical care will be delayed several hours, give the patient three to four 1-ounce oral "shots" of 86-proof or higher whiskey before or during transport to the hospital. Fomepizole (4-methylpyrazole) is an effective antagonist of alcohol dehydrogenase, and as such, may be |



SAFETY DATA SHEET

ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

Print Date:
05/28/2022

used as an antidote in the treatment of ethylene glycol poisoning. Hemodialysis effectively removes ethylene glycol and its metabolites from the body.

No hazards which require special first aid measures.

Treat symptomatically.

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
Specific extinguishing methods	:
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.



SAFETY DATA SHEET

ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

Print Date:
05/28/2022

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
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.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ETHYLENE GLYCOL	107-21-1	TWA	25 ppm Vapour	ACGIH
		STEL	50 ppm Vapour	ACGIH
		STEL	10 mg/m3 Inhalable fraction, Aerosol only	ACGIH
		C	50 ppm 125 mg/m3	OSHA P0
		C	40 ppm 100 mg/m3 Vapour	CAL PEL
SODIUM BORATE DECAHYDRATE	1303-96-4	TWA	5 mg/m3	NIOSH REL
		TWA	10 mg/m3	OSHA P0
		PEL	5 mg/m3	CAL PEL
		TWA	2 mg/m3 Inhalable particulate matter (Borate)	ACGIH
		STEL	6 mg/m3 Inhalable particulate matter	ACGIH



SAFETY DATA SHEET
ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

Print Date:
05/28/2022

			(Borate)	
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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

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 : blue

Odour : No data available

Odour Threshold : No data available

pH : 7.5 - 11

Melting point/freezing point : No data available

Boiling point/boiling range : 212 °F / 100 °C
(1,013.333333 hPa)
Calculated Phase Transition Liquid/Gas

Flash point : > 250 °F / > 121 °C

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Self-ignition : No data available



SAFETY DATA SHEET
ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

Print Date:
05/28/2022

Upper explosion limit / Upper flammability limit	: 15.3 %(V) GLP: Calculated Explosive Limit
Lower explosion limit / Lower flammability limit	: 1.2 %(V) GLP: Calculated Explosive Limit
Vapour pressure	: 23.3333333 hPa (68 °F / 20 °C) Calculated Vapor Pressure
Relative vapour density	: No data available
Relative density	: No data available
Density	: 1.0738 g/cm3 (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 reactions	: No decomposition if stored and applied as directed.
Conditions to avoid	: excessive heat No data available
Incompatible materials	: Aldehydes Alkali metals Alkaline earth metals



SAFETY DATA SHEET
ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

Print Date:
05/28/2022

aluminum
Lead
sodium
Strong acids
strong alkalis
Strong bases
Strong oxidizing agents
Sulphur compounds
Zinc
Peroxides

Not applicable

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: 1,043 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 administration) : LD50 (Rat): 5,010 mg/kg
Application Route: Intraperitoneal

LD50 (Rat): 3,260 mg/kg
Application Route: Intravenous

2-ETHYLHEXANOIC ACID, SODIUM SALT:

Acute oral toxicity : LD50 (Rat): 2,043 mg/kg
Remarks: The toxicological data has been taken from



SAFETY DATA SHEET
ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

Print Date:
05/28/2022

products of similar composition.

Acute inhalation toxicity : Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: The toxicological data has been taken from products of similar composition.

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: The toxicological data has been taken from products of similar composition.

SODIUM BORATE DECAHYDRATE:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: The toxicological data has been taken from products of similar composition.
No mortality observed at this dose.

Acute inhalation toxicity : LC50 (Rat): > 2.04 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: The toxicological data has been taken from products of similar composition.
No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: The toxicological data has been taken from products of similar composition.
No mortality observed at this dose.

Skin corrosion/irritation

Not classified based on available information.

Product:

Result : Repeated exposure may cause skin dryness or cracking.

Components:

ETHYLENE GLYCOL:

Species : Rabbit
Result : No skin irritation



SAFETY DATA SHEET
ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

Print Date:
05/28/2022

2-ETHYLHEXANOIC ACID, SODIUM SALT:

Species : Rabbit
Result : Slight, transient irritation
Remarks : The toxicological data has been taken from products of similar composition.

SODIUM BORATE DECAHYDRATE:

Species : Rabbit
Result : Slight, transient irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

ETHYLENE GLYCOL:

Result : Slight, transient irritation

2-ETHYLHEXANOIC ACID, SODIUM SALT:

Species : Rabbit
Result : Slight, transient irritation
Remarks : The toxicological data has been taken from products of similar composition.

SODIUM BORATE DECAHYDRATE:

Species : Rabbit
Result : Irritating to eyes.

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.

2-ETHYLHEXANOIC ACID, SODIUM SALT:

Test Type : Maximisation Test
Species : Guinea pig
Assessment : Does not cause skin sensitisation.
Method : OECD Test Guideline 406
Result : Does not cause skin sensitisation.
Remarks : The toxicological data has been taken from products of similar composition.

SODIUM BORATE DECAHYDRATE:

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



SAFETY DATA SHEET
ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

Print Date:
05/28/2022

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

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

2-ETHYLHEXANOIC ACID, SODIUM SALT:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative
Remarks: The toxicological data has been taken from products of similar composition.

Carcinogenicity

Not classified based on available information.

IARC 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

May damage fertility or the unborn child.

Components:

2-ETHYLHEXANOIC ACID, SODIUM SALT:

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

SODIUM BORATE DECAHYDRATE:

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

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.



SAFETY DATA SHEET
ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

Print Date:
05/28/2022

Components:

ETHYLENE GLYCOL:

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

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

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : 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 : EC50 (Pseudokirchneriella subcapitata (green algae)): 6,500 - 13,000 mg/l
End point: Growth inhibition
Exposure time: 7 Days

Toxicity to fish (Chronic) : NOEC (Pimephales promelas (fathead minnow)): 32,000 mg/l



SAFETY DATA SHEET
ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

Print Date:
05/28/2022

toxicity)	Exposure time: 7 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Daphnia magna (Water flea)): 24,000 mg/l Exposure time: 7 d
Ecotoxicology Assessment Short-term (acute) aquatic hazard	: Not classified based on available information.
Long-term (chronic) aquatic hazard	: Not classified based on available information.
2-ETHYLHEXANOIC ACID, SODIUM SALT:	
Toxicity to fish	: LC50 (Oryzias latipes (Japanese medaka)): > 100 mg/l Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 910 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae	: EC50 (Desmodesmus subspicatus (green algae)): 49.3 mg/l End point: Growth inhibition Exposure time: 72 h Test Type: static test Remarks: The toxicological data has been taken from products of similar composition.
SODIUM BORATE DECAHYDRATE:	
Toxicity to fish	: LC50 (Fish): > 100 mg/l Exposure time: 96 h Remarks: The toxicological data has been taken from products of similar composition.
Toxicity to daphnia and other aquatic invertebrates	: LC50 (Daphnia magna (Water flea)): 133 mg/l Exposure time: 48 h Test Type: static test Remarks: The toxicological data has been taken from products of similar composition.
Toxicity to algae	: NOEC (Dunaliella tertiolecta (marine algae)): 50 mg/l End point: Growth inhibition Exposure time: 240 h Test Type: static test Remarks: Information refers to the main component.
Toxicity to fish (Chronic toxicity)	: NOEC (Danio rerio (zebra fish)): 13 mg/l Exposure time: 4 d



SAFETY DATA SHEET
ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

Print Date:
05/28/2022

Remarks: Information refers to the main component.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 16.6 mg/l
Exposure time: 28 d
Test Type: flow-through test
Remarks: Information refers to the main component.

Persistence and degradability

Components:

ETHYLENE GLYCOL:

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

2-ETHYLHEXANOIC ACID, SODIUM SALT:

Biodegradability : Result: Readily biodegradable.
Biodegradation: > 70 %
Exposure time: 28 d
Method: OECD Test Guideline 301E
Remarks: The toxicological data has been taken from products of similar composition.

No data available

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

2-ETHYLHEXANOIC ACID, SODIUM SALT:

Partition coefficient: n-octanol/water : log Pow: 1.3

No data available

Mobility in soil

Components:

No data available

Other adverse effects

No data available

Product:

Regulation

40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
This product neither contains, nor was manufactured with a

Remarks



SAFETY DATA SHEET
ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

Print Date:
05/28/2022

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 : No data available

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : 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.
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

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



SAFETY DATA SHEET
ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

Print Date:
05/28/2022

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

CERCLA Reportable Quantity

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)
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)

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

ETHYLENE 107-21-1 >= 30 - < 50 %
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 >= 30 - < 50 %

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 >= 30 - < 50 %

Clean Water Act

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

TOLUENE 108-88-3 >= 0 - < 0.1 %

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

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



SAFETY DATA SHEET
ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

Print Date:
05/28/2022

California Prop. 65

 **WARNING:** Reproductive Harm - www.P65Warnings.ca.gov.

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

TCSI	: On the inventory, or in compliance with the inventory
TSCA	: All substances listed as active on the TSCA inventory
AIIC	: Not in compliance with the inventory
DSL	: All components of this product are on the Canadian DSL
ENCS	: Not in compliance with the inventory
ISHL	: Not in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
NZIoC	: Not in compliance with the inventory
TECI	: Not in compliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

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

Inventories

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

SECTION 16. OTHER INFORMATION

Further information

Internal information : 000000091712

NFPA:	HMIS III:
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SAFETY DATA SHEET
ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

Print Date:
05/28/2022

Flammability Health Instability Special hazard	<table border="1"><tr><td>HEALTH</td><td>2*</td></tr><tr><td>FLAMMABILITY</td><td>1</td></tr><tr><td>PHYSICAL HAZARD</td><td>0</td></tr></table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	2*	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	2*						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H360	May damage fertility or the unborn child.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.

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.



SAFETY DATA SHEET
ZEREX™ G-48® Formula 50/50 Antifreeze
Coolant

Version: 1.11

Revision Date: 10/21/2021

Print Date:
05/28/2022

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