



Safety Data Sheet

This safety data sheet complies with the requirements of: 2012 OSHA Hazard Communication Standard (29CFR 1910.1200)

Product name LFP® Antifreeze

1. Identification

1.1. Product Identifier

Product name LFP® Antifreeze

1.2. Other means of identification

Product code 446926
Synonyms None
Chemical Family No information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use No information available.
Uses advised against Consumer use.

1.4. Details of the Supplier of the Safety Data Sheet

Company Name Johnson Controls
1400 Pennbrook Parkway
Lansdale, PA 19446
Contact point Product Stewardship at 1-715-735-7411
E-mail address psra@tycofp.com

1.5. Emergency Telephone Number

Emergency telephone CHEMTREC 001-800-424-9300 or 001-703-527-3887

2. Hazards Identification

Classification

This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.2. Label Elements

Hazard Statements

The product contains no substances which at their given concentration, are considered to be hazardous to health

Precautionary Statements

2.3. Hazards Not Otherwise Classified (HNOC)

Not Applicable.

**2.4. Other Information**

Not Available.

3. Composition/information on Ingredients**3.1. Mixture**

The product contains no substances which at their given concentration, are considered to be hazardous to health.

4. First aid measures**4.1. Description of first aid measures**

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water. Get medical attention if irritation develops and persists.
Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. (Get medical attention immediately if symptoms occur.)
Ingestion	Rinse mouth. Do not induce vomiting without medical advice. If swallowed, call a poison control center or physician immediately.

4.2. Most Important Symptoms and Effects, Both Acute and Delayed**Symptoms** No information available.**4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed****Note to physicians** Treat symptomatically.**5. Fire-fighting measures****5.1. Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2. Unsuitable Extinguishing Media

None.

5.3. Specific Hazards Arising from the Chemical

No information available.

5.4. Explosion Data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.



5.5. Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions Ensure adequate ventilation, especially in confined areas.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental Precautions

Environmental Precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1. Precautions for Safe Handling

Advice on safe handling Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Use with local exhaust ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Materials Strong oxidizing agents. Strong acids. Strong bases.

8. Exposure Controls/Personal Protection

8.1. Control Parameters

Exposure guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

8.2. Appropriate Engineering Controls

Engineering controls Ensure adequate ventilation, especially in confined areas.

8.3. Individual protection measures, such as personal protective equipment

Eye/Face Protection Avoid contact with eyes. Tight sealing safety goggles.

Skin and Body Protection Wear protective gloves and protective clothing.

**Respiratory Protection**

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Ventilation

Use local exhaust or general dilution ventilation to control exposure with applicable limits

8.4. General hygiene considerations

Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties**9.1. Information on basic physical and chemical properties**

Physical State	Liquid	Color	Colorless
Odor	Slight		
Odor Threshold	No data available		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	7 - 8	
Melting point/freezing point	- 24 °C / - 11 °F	
Boiling point / boiling range	120 °C / 248 °F	
Flash Point	No data available	
Evaporation Rate	No data available	
Flammability (solid, gas)	No data available	
Flammability limit in air		
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor Pressure	No data available	
Vapor Density	No data available	
Specific gravity	1.122 - 1.129	
Water Solubility	No data available	
Solubility in Other Solvents	No data available	
Partition coefficient	< -2.04	
Autoignition Temperature	No data available	
Decomposition Temperature	No data available	
Kinematic viscosity	No data available	

10. Stability and Reactivity**10.1. Chemical Stability**

Stable under recommended storage conditions.

10.2. Reactivity

No data available

10.3. Possibility of hazardous reactions

None under normal processing.



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Hazardous Polymerization Hazardous polymerization does not occur.

10.4. Conditions to Avoid

Protect from direct sunlight.

10.5. Incompatible Materials

Strong oxidizing agents. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Carbon oxides. Nitrogen oxides (NOx).

11. Toxicological Information

11.1. Information on Likely Routes of Exposure

Product information Product does not present an acute toxicity hazard based on known or supplied information

Inhalation May cause irritation of respiratory tract.

Eye Contact Moderately irritating to the eyes.

Skin contact No known hazard in contact with skin.

Ingestion Ingestion may cause irritation to mucous membranes.

Component Information

Acute Toxicity

11.2. Information on Toxicological Effects

Symptoms No information available.

11.3. Delayed and immediate effects as well as chronic effects from short and long-term exposure

Product information

Method	species	Exposure Route	Effective dose	Exposure time	Results
OECD Test No. 403: Acute Inhalation Toxicity	Rat				LD50 2.12 mg/l
OECD Test No. 425: Acute Oral Toxicity: Up-and-Down Procedure	Rat				> 2000 mg/kg
OECD Test No. 402: Acute Dermal Toxicity	Rat				LD50 > 2000 mg/kg

Product information

Method	species	Exposure Route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	eye			Mild eye irritation

Product information

Method	species	Exposure Route	Results
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OECD Test No. 406: Skin Sensitization	guinea pig		Not a skin sensitizer
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Product information

Method	species	Results
OECD 471		Not mutagenic in AMES Test

Carcinogenicity	Contains no ingredients above reportable quantities listed as carcinogen.
Reproductive Toxicity	This product does not contain any known or suspected reproductive hazards.
STOT - Single Exposure	No information available.
STOT - Repeated Exposure	No information available.
Target organ effects	Eyes, Kidney, Respiratory System, Skin.
Aspiration Hazard	No information available.

11.4. Numerical Measures of Toxicity - Product information

The following values are calculated based on chapter 3.1 of the GHS document

12. Ecological Information

12.1. Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Crustacea
Glycerol 56-81-5	-	LC50 (96h) static 51 - 57 mL/L Oncorhynchus mykiss	EC50 (24h) > 500 mg/L Daphnia magna
Potassium Acetate 127-08-2	-	LC50 (96h) semi-static = 6800 mg/L Oncorhynchus mykiss	EC50 (24h) = 7170 mg/L Daphnia magna
Triethanolamine 102-71-6	EC50 (72h) = 216 mg/L Desmodemus subspicatus EC50 (96h) = 169 mg/L Desmodemus subspicatus	LC50 (96h) static > 1000 mg/L Pimephales promelas LC50 (96h) flow-through 10600 - 13000 mg/L Pimephales promelas LC50 (96h) static 450 - 1000 mg/L Lepomis macrochirus	EC50 (24h) = 1386 mg/L Daphnia magna
Sodium Citrate 68-04-2	EC50 (96h) 18000 - 32000 mg/L Chlorella vulgaris	LC50 (96h) 18000 - 32000 mg/L Poecilia reticulata	EC50 (48h) 5600 - 10000 mg/L Daphnia magna
Diethanolamine 111-42-2	EC50 (96h) 2.1 - 2.3 mg/L Pseudokirchneriella subcapitata EC50 (72h) = 7.8 mg/L Desmodemus subspicatus	LC50 (96h) flow-through 4460 - 4980 mg/L Pimephales promelas LC50 (96h) static 1200 - 1580 mg/L Pimephales promelas LC50 (96h) static 600 - 1000 mg/L Lepomis macrochirus	EC50 (48h) = 55 mg/L Daphnia magna

Concentrate

Method	OECD Test No. 203: Fish, Acute Toxicity Test
Species	Oncorhynchus mykiss (rainbow trout)
Endpoint type	LC50
Exposure time	96h
Results	> 100 mg/L

Method	Acute Toxicity Daphnia magna
Species	Daphnia magna
Endpoint type	EC50
Exposure time	48h
Results	> 100 mg/L

**12.2. Persistence and Degradability**

No information available.

Biodegradability (B.O.D./C.O.D.) 268/431

12.3. Bioaccumulation

No information available.

12.4. Other Adverse Effects

No information available

13. Disposal Considerations**13.1. Waste Treatment Methods****Disposal of wastes**

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging

Do not reuse container.

14. Transport Information

<u>DOT</u>	NOT REGULATED
<u>TDG</u>	NOT REGULATED
<u>MEX</u>	NOT REGULATED
<u>ICAO (air)</u>	NOT REGULATED
<u>IATA</u>	NOT REGULATED
<u>IMDG</u>	NOT REGULATED

15. Regulatory Information**15.1. International Inventories**

TSCA	Complies
DSL/NDSL	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies



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AICS Complies

Legend:

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

15.2. US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic health hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

15.3. US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Diethanolamine - 111-42-2	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Glycerol 56-81-5	X	X	X
Triethanolamine 102-71-6	X	X	X
Diethanolamine 111-42-2	X	X	X



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16. Other information, including date of preparation of the last revision

<u>NFPA</u>	Health Hazards 0	Flammability 0	Instability 0	Physical and chemical properties -
<u>HMIS</u>	Health Hazards 0	Flammability 0	Physical Hazards 0	Personal Protection X

Revision date 02-Feb-2021

Revision note No information available.

Disclaimer

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.

End of Safety Data Sheet