



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.



Product code 446926

/ Product name LFP® Antifreeze /

PAGE 2 / 9

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.



Product code 446926

/ Product name LFP® Antifreeze /

PAGE 4 / 9

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.



Product code 446926

/ Product name LFP® Antifreeze /

PAGE 5 / 9

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 |
|--------|---------|----------------|---------|
|--------|---------|----------------|---------|



Product code 446926

/ Product name LFP® Antifreeze /

PAGE 6 / 9

| | | | |
|---------------------------------------|------------|--|-----------------------|
| OECD Test No. 406: Skin Sensitization | guinea pig | | Not a skin sensitizer |
|---------------------------------------|------------|--|-----------------------|

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 |



Product code 446926

/ Product name LFP® Antifreeze /

PAGE 8 / 9

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 |



Product code 446926

/ Product name LFP® Antifreeze /

PAGE 9 / 9

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