

Issuing Date 07-Jun-2024

Revision Date 9-Jan-2025

Revision Number 3

1. Identification

Product identifier

Product Name Xtended Life Formula - Antifreeze and Coolant

Other means of identification

Product Code(s) ED0003022950-S, ED0003022960-S, ED0003022980-S, ED0003023050-S, ED0003023060-S

UN/ID no UN3082

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Coolant

Restrictions on use Avoid formation of mists

Details of the supplier of the safety data sheet

Manufactured for

Discovery Energy, LLC
200 Twin Oaks Road
Kohler, WI 53044 USA
T: 1-800-544-2444

Emergency telephone number

Emergency telephone CHEMTREC: Within USA and Canada: 1-800-424-9300
Outside the USA and Canada: +1 703-741-5970
(collect calls accepted) 24/7

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Specific target organ toxicity (repeated exposure)	Category 2

Label elements

Warning

Hazard statements

Harmful if swallowed.
May cause damage to organs through prolonged or repeated exposure: Kidney.

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Do not breathe dust, fume, gas, mist, vapors and spray.

Precautionary Statements - Response

Get medical advice/attention if you feel unwell.

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

Rinse mouth.

Precautionary Statements - Disposal

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

Other information

No information available.

3. Composition/information on ingredients**Substance**

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%
Ethane-1,2-diol	107-21-1	30-60

*The exact percentage (concentration) of composition has been withheld as a trade secret.

Chemical Additions

The classification as a carcinogen does not apply as it can be shown that the substance(s) contain(s) less than 3% DMSO extract as measured by IP 346.

4. First-aid measures**Description of first aid measures****General advice**

Show this safety data sheet to the doctor in attendance.

Inhalation

Remove person to fresh air and keep comfortable for breathing.

Eye contact

Rinse thoroughly with plenty of water, also under the eyelids. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact

Wash skin with soap and water. Take off contaminated clothing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

Self-protection of the first aider Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms May cause temporary eye irritation. May cause gastrointestinal discomfort if consumed in large amounts. Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization in susceptible persons. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness and difficulty breathing.

Effects of Exposure May cause damage to organs through prolonged or repeated exposure: Kidney.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical Containers can burst or explode when heated, due to excessive pressure build-up. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous combustion products Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. See section 8 for more information. Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

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 Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13). Clean contaminated surface thoroughly. After cleaning, flush away traces with water.

Reference to other sections For additional information see: Section 8: Exposure controls/personal protection; Section 12: Ecological information; Section 13: Disposal considerations.

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with used product. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed in a dry and well-ventilated place. Do not reuse empty containers. Store away from incompatible materials. See section 10 for more information. Protect from physical damage.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

Chemical name	ACGIH TLV		OSHA PEL	NIOSH	
Ethane-1,2-diol 107-21-1	TWA: 25 ppm vapor fraction STEL: 50 ppm vapor fraction STEL: 10 mg/m ³ inhalable particulate matter, aerosol only		(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m ³	-	
Chemical name	Alberta	British Columbia	Ontario	Quebec	
Ethane-1,2-diol 107-21-1	Ceiling: 100 mg/m ³	TWA: 10 mg/m ³ STEL: 20 mg/m ³ Ceiling: 100 mg/m ³ Ceiling: 50 ppm	TWA: 25 ppm STEL: 50 ppm STEL: 10 mg/m ³	Ceiling: 50 ppm Ceiling: 127 mg/m ³	

Chemical name	Manitoba	New Brunswick	Newfoundland and Labrador	Nova Scotia
Ethane-1,2-diol	TWA: 25 ppm STEL: 50 ppm STEL: 10 mg/m ³	Ceiling: 100 mg/m ³	TWA: 25 ppm STEL: 50 ppm STEL: 10 mg/m ³	TWA: 25 ppm STEL: 50 ppm STEL: 10 mg/m ³

Chemical name	Nunavut	Prince Edward Island	Saskatchewan	Yukon
Ethane-1,2-diol	Ceiling: 100 mg/m ³	TWA: 25 ppm STEL: 50 ppm STEL: 10 mg/m ³	Ceiling: 100 mg/m ³	TWA: 10 mg/m ³ TWA: 100 ppm TWA: 250 mg/m ³ STEL: 10 ppm STEL: 20 mg/m ³ STEL: 125 ppm STEL: 325 mg/m ³

Biological occupational exposure limits

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

Appropriate engineering controls

Engineering controls

Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face protection	If there is a risk of contact: Wear safety glasses with side shields (or goggles).
Hand protection	If there is a risk of contact: Wear suitable gloves. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves.
Skin and body protection	If there is a risk of contact: Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
Environmental exposure controls	Avoid release to the environment. Local authorities should be advised if significant spillages cannot be contained.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state	Liquid
Color	Red
Odor	Odorless
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH		No data available
Melting point / freezing point		No data available
Initial boiling point and boiling range		No data available
Flash point	142.8 °C / 289.04 °F	Cleveland Open Cup
Evaporation rate		No data available
Flammability		No data available
Flammability Limit in Air		
Upper flammability or explosive limits		No data available
Lower flammability or explosive limits		No data available
Vapor pressure		No data available
Relative vapor density		No data available
Relative density	1.0750	No data available
Water solubility		No data available
Solubility(ies)		No data available
Partition coefficient		No data available
Autoignition temperature		No data available
Decomposition temperature		No data available
Kinematic viscosity	2.23 cSt @ 40 °C 0.73 cSt @ 100 °C	ASTM D445
Dynamic viscosity		No data available

Other information

Explosive properties	No information available.
Oxidizing properties	No information available.
Softening point	No information available
Molecular weight	No information available

VOC content	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity

Reactivity	None under normal use conditions.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	Thermal decomposition can lead to release of irritating gases and vapors. Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	May cause temporary eye irritation. Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization in susceptible persons. May cause gastrointestinal discomfort if consumed in large amounts. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness and difficulty breathing.
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<u>Acute toxicity</u>	Harmful if swallowed.
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Numerical measures of toxicity

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

ATEmix (oral)	833.30 mg/kg
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Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ethane-1,2-diol	> 10000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 2.5 mg/L (Rat) 6 h

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

Skin corrosion/irritation	No information available.
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Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity The supplier declares that it can be shown that the substance(s) contain less than 3% DMSO extract as measured by IP 346.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Ethane-1,2-diol 107-21-1	Not listed	A4	Not listed	Not listed

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard Due to the viscosity, this product does not present an aspiration hazard.

12. Ecological information

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ethane-1,2-diol 107-21-1	EC50: 6500 - 13000mg/L (96h, Pseudokirchneriella subcapitata)	LC50: =41000mg/L (96h, Oncorhynchus mykiss) LC50: 14 - 18mL/L (96h, Oncorhynchus mykiss) LC50: =27540mg/L (96h, Lepomis macrochirus) LC50: =40761mg/L (96h, Oncorhynchus mykiss) LC50: 40000 - 60000mg/L (96h, Pimephales promelas) LC50: =16000mg/L (96h, Poecilia reticulata)	-	EC50: =46300mg/L (48h, Daphnia magna)

Persistence and degradability No information available.

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Ethane-1,2-diol 107-21-1	-1.36

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products	Dispose of in accordance with local regulations, Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

14. Transport information

Note: **Reportable quantity:** 5000 lbs/2270 kg [621.55 gal / 2352.8 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

DOT

Notes

Shipping container and transport vehicle placarding and labeling may vary from the below information. Products that are regulated for transport will be packaged and marked as Dangerous Goods in Limited Quantities according to US DOT, IATA and IMDG regulations. In case of reshipment, it is the responsibility of the shipper to determine the appropriate labels and markings in accordance with applicable transport regulations.

UN/ID no

UN3082

Proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport hazard class(es)

9

Packing group

III

Special Provisions

8, 146, 173, 335, 441, IB3, T4, TP1, TP29

DOT Marine Pollutant

NP

Description

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Ethane-1,2-diol), 9, III

TDG

Not regulated

IATA

Not regulated

IMDG

Not regulated

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

Contact supplier for inventory compliance status

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical

or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Ethane-1,2-diol - 107-21-1	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

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, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	Reportable Quantity (RQ)
Ethane-1,2-diol 107-21-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:.

Chemical name	California Proposition 65
Ethane-1,2-diol - 107-21-1	Developmental

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Ethane-1,2-diol 107-21-1	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

<u>NFPA</u>	Health hazards 1	Flammability 1	Instability 0	Special hazards -
<u>HMIS</u>	Health hazards * 2	Flammability 1	Physical hazards 0	Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend

SVHC: Substances of Very High Concern for Authorization:
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances
STOT: Specific Target Organ Toxicity
ATE: Acute Toxicity Estimate
LC50: 50% Lethal Concentration
LD50: 50% Lethal Dose

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	SK*	Skin designation
+	Sensitizers		

Key literature references and sources for data used to compile the SDS

U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGl(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

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Revision Note Customer-specific SDS

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