Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Drydene DieselAll Nitrite-Free ELC Concentrate Antifreeze/Coolant

SECTION 1: Identification

Product Identifier

Product Name: Drydene DieselAll Nitrite-Free ELC Concentrate Antifreeze/Coolant

Product code: D85203

Recommended Use of the Product and Restriction on Use

Relevant Identified Uses: Heavy Duty Engine Coolant

Uses Advised Against: Any use than recommended above.

Reasons Why Uses Advised Against: Not determined or not applicable.

Manufacturer or Supplier Details

Manufacturer:

United States

Reladyne, LLC
8280 Montgomery Road
Suite 1 Cincinnati, OH 45236
(888) 830-3156
sds@reladyne.com

Emergency Telephone Number:

United States

INFOTRAC
(800) 535-5053 (24/7)

SECTION 2: Hazard(s) Identification

GHS Classification:

Acute toxicity (oral), category 4
Reproductive toxicity, category 1B
Specific target organ toxicity - repeated exposure, category 1
Chronic aquatic hazard, category 4

Label elements

Hazard Pictograms:

Signal Word: Danger

Hazard statements:

H360 May damage fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H302 Harmful if swallowed
H413 May cause long lasting harmful effects to aquatic life

Precautionary Statements:

P201 Obtain special instructions before use
P202 Do not handle until all safety precautions have been read and understood
P280 Wear protective gloves, protective clothing and eye protection.
P260 Do not breathe dust/fume/gas/mist/vapors/spray
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product
P273 Avoid release to the environment
P308+P313 If exposed or concerned: Get medical advice.
P314 Get medical advice if you feel unwell.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P330 Rinse mouth
P405 Store locked up
P501 Dispose of contents and container in accordance with local, regional, national, and international regulations.

Hazards Not Otherwise Classified: None

SECTION 3: Composition/Information on Ingredients

Identification	Name	Weight %
CAS Number: 107-21-1	Ethane-1,2-diol	90-97
CAS Number: 111-46-6	2,2' -Oxybisethanol diethylene glycol	<5
CAS Number: 532-32-1	Sodium benzoate	<4
CAS Number: 7732-18-5	Water	<4
CAS Number: 16518-26-6	Potassium p-tert-butylbenzoate	<3
CAS Number: 3734-33-6	Denatonium benzoate	0.003-0.005

Additional Information: None

SECTION 4: First Aid Measures

Description of First Aid Measures

General Notes:

Show this Safety Data Sheet to the doctor in attendance. Take precautions to ensure your own safety before attempting rescue. Wear appropriate safety eyewear, gloves, protective clothing and respiratory protection to prevent exposure. See Section 8 of this SDS for personal protective equipment recommendations. Do not use the mouth to mouth method if victim has ingested or inhaled the product. Give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper device.

After Inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention.

After Skin Contact:

Wash affected area with plenty of soap and water. Remove contaminated clothing and launder before reuse. If skin irritation develops or persists, seek medical advice/attention.

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention.

After Eye Contact:

Immediately rinse eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. If eye irritation develops or persists, seek medical advice/attention.

After Swallowing:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms develop or persist, seek medical advice/attention.

Most Important Symptoms and Effects, Both Acute and Delayed

Acute Symptoms and Effects:

Acute oral exposure may lead to dizziness, drowsiness, headache, breathing difficulties, nausea, vomiting, abdominal pain, and lowering of consciousness. Adverse effects are dependent on exposure (dose, concentration, contact time).

Delayed Symptoms and Effects:

Long term exposure may affect fertility. Symptoms include, but are not limited to: menstrual problems, altered sexual behavior/fertility/ and pregnancy outcome. Long term exposure may also affect development of the unborn child. Symptoms include, but are not limited to: intrauterine growth retardation, pre-term birth, birth defects and postnatal death.

Causes damage to organs through prolonged or repeated exposure. Effects are dependent on exposure (dose, concentration, contact time).

Symptoms of exposure may be delayed.

Immediate Medical Attention and Special Treatment

Specific Treatment:

Not determined or not applicable.

Notes for the Doctor:

Treat symptomatically.

SECTION 5: Firefighting Measures

Extinguishing Media

Suitable Extinguishing Media:

Water mist/fog, carbon dioxide, dry chemical or alcohol resistant foam.

Unsuitable Extinguishing Media:

Do not use water jet.

Specific Hazards During Fire-Fighting:

Thermal decomposition may produce irritating/toxic fumes/gases.

Special Protective Equipment for Firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

Special precautions:

Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers.

Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6: Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures:

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Do not get on skin, eyes or on clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling. Remove contaminated clothing and launder before reuse.

Environmental Precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

Methods and Material for Containment and Cleaning Up:

Harmful if swallowed. Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Avoid breathing dust, mist, fumes, vapors or spray. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Reference to Other Sections:

For personal protective equipment see Section 8. For disposal see Section 13.

SECTION 7: Handling and Storage

Precautions for Safe Handling:

Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Conditions for Safe Storage, Including Any Incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10).

SECTION 8: Exposure Controls/Personal Protection

Only those substances with limit values have been included below.

Occupational Exposure Limit Values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Ethane-1,2-diol	107-21-1	8-Hour TWA: 25 ppm (vapor fraction)
	Ethane-1,2-diol	107-21-1	15-Minute STEL: 50 ppm (vapor fraction)
	Ethane-1,2-diol	107-21-1	15-Minute STEL: 10 mg/m³ (aerosol only, inhalable fraction)
	Sodium benzoate	532-32-1	8-Hour TWA: 2.5 mg/m³ (as benzoate, inhalable fraction)
OSHA	Ethane-1,2-diol	107-21-1	Ceiling Limit: 125 mg/m³ (50 ppm)
United States(California)	Ethane-1,2-diol	107-21-1	Ceiling Limit: 100 mg/m³ (40 ppm)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Ethane-1,2-diol	107-21-1	REL: 400 ug/m³ (Chronic Inhalation)
WEEL	2,2' -Oxybisethanol diethylene glycol	111-46-6	8-Hour TWA: 10 mg/m³

Biological Limit Values:

No biological exposure limits noted for the ingredient(s).

Information on Monitoring Procedures:

Not determined or not applicable.

Appropriate Engineering Controls:

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Personal Protection Equipment

Eye and Face Protection:

Safety glasses or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Skin and Body Protection:

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Respiratory Protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.

General Hygienic Measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

SECTION 9: Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Appearance	Red Liquid
Odor	Mild
Odor threshold	Not determined or not available.
pH	8.6
Melting point/freezing point	-18 °C (0 ºF)
Initial boiling point/range	158 °C (316 ºF)
Flash point (closed cup)	116 °C (241 ºF) [100% Ethylene Glycol] ASTM D56
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	15.3%

Lower flammability/explosive limit	3.2%
Vapor pressure	< 0.1 mm Hg @ 20 ºC
Vapor density	Not determined or not available.
Density	1.14 kg/l (9.47 lbs/gal)
Relative density	Not determined or not available.
Solubilities	Water: Complete
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	400 °C (752 ºF) [100% Ethylene Glycol] Literature
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

SECTION 10: Stability and Reactivity

Reactivity:
Not reactive under recommended handling and storage conditions.

Chemical Stability:
Stable under recommended handling and storage conditions.

Possibility of Hazardous Reactions:
Hazardous reactions are not anticipated under recommended conditions of handling and storage.

Conditions to Avoid:
Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

Incompatible Materials:
None known.

Hazardous Decomposition Products:
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological Information

Acute Toxicity

Assessment:
Harmful if swallowed.

Product Data: No data available.

Substance Data:

Name	Route	Result
Ethane-1,2-diol	dermal	LD50 Mouse: > 3500 mg/kg
	Oral ATE	LD50 Rat: 500 mg/kg (Converted acute toxicity point estimate)
2,2' -Oxybisethanol diethylene glycol	dermal	LD50 Rabbit: 13,300 mg/kg
	inhalation	LC50 Rat: >4.6 mg/L (4 hr [Aerosol])
	Oral ATE	LD50 Rat: 500 mg/kg (Conversion point corresponding to Hazard Classification)

Name	Route	Result
Sodium benzoate	oral	LD50 Rat: 3450 mg/kg
	inhalation	LC50 Rat: 12.2 mg/L (4 hr [Dust])
	dermal	LD50 Rabbit: >2000 mg/kg
Potassium p-tert-butylbenzoate	Oral ATE	LD50 Rat: 500 mg/kg
Denatonium benzoate	oral	LD50 Rat: 749 mg/kg
	dermal	LD50 Rat: >2000 mg/kg
	Inhalation ATE	LC50 Rat: 1.5 mg/L (4 hr [dust])

Skin Corrosion/Irritation

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Serious Eye Damage/Irritation

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data:

Name	Result
Sodium benzoate	Causes serious eye irritation.
Denatonium benzoate	Causes serious eye damage.

Respiratory or Skin Sensitization

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data: No data available.

International Agency for Research on Cancer (IARC):

Name	Classification
Ethane-1,2-diol	Not Applicable
2,2' -Oxybisethanol diethylene glycol	Not Applicable
Sodium benzoate	Not Applicable
Water	Not Applicable
Potassium p-tert-butylbenzoate	Not Applicable
Denatonium benzoate	Not Applicable

National Toxicology Program (NTP):

Name	Classification
Ethane-1,2-diol	Not Applicable
2,2' -Oxybisethanol diethylene glycol	Not Applicable

Name	Classification
Sodium benzoate	Not Applicable
Water	Not Applicable
Potassium p-tert-butylbenzoate	Not Applicable
Denatonium benzoate	Not Applicable

OSHA Carcinogens: Not applicable

Germ Cell Mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Reproductive Toxicity

Assessment:

May damage fertility or the unborn child.

Product Data:

No data available.

Substance Data:

Name	Result
Potassium p-tert-butylbenzoate	May damage fertility or the unborn child.

Specific Target Organ Toxicity (Single Exposure)

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Specific Target Organ Toxicity (Repeated Exposure)

Assessment:

Causes damage to organs through prolonged or repeated exposure.

Product Data:

No data available.

Substance Data:

Name	Result
Ethane-1,2-diol	May cause damage to Kidney through prolonged or repeated oral exposure.
Potassium p-tert-butylbenzoate	Causes damage to organs through prolonged or repeated exposure.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Information on Likely Routes of Exposure:

No data available.

Symptoms Related to the Physical, Chemical, and Toxicological Characteristics:

No data available.

Other Information:

No data available.

SECTION 12: Ecological Information

Acute (Short-Term) Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data:

Name	Result
Ethane-1,2-diol	Aquatic Plants EC50 Raphidocelis subcapitata: 6500 - 13,000 mg/L (96 hr [growth rate])
	Aquatic Invertebrates EC50 Daphnia magna: > 100 mg/L (48 hr)
	Fish LC50 Pimephales promelas: 72,860 mg/L (96 hr)
2,2' -Oxybisethanol diethylene glycol	Fish LC50 Pimephales promelas: 75,222 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: 62,630 mg/L (48 hr [mortality])
	Aquatic Plants EC50 Freshwater algea: 6500 mg/L (96 hr)
Sodium benzoate	Fish LC50 Pimephales promelas: 484 mg/L (96 hr)
	Aquatic Plants EC50 Raphidocelis subcapitata: >30.5 mg/L (72 hr [growth rate])
Denatonium benzoate	Fish LC50 Danio rerio: >100 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: >500 mg/L (48 hr [mortality])
	Aquatic Plants EC50 Freshwater algae: 281 mg/L (72 hr [growth rate])

Chronic (Long-Term) Toxicity

Assessment:

May cause long lasting harmful effects to aquatic life.

Product Data: No data available.

Substance Data:

Name	Result
Ethane-1,2-diol	Fish NOEC Menidia peninsulae: > 40 mg/L (28 d [mortality])
	Aquatic Invertebrates NOEC Daphnia magna: > 15,000 mg/L mg/L (21 d [reproduction])
2,2' -Oxybisethanol diethylene glycol	Fish LC50 Menidia peninsulae: >1500 mg/L (28 day)
	Aquatic Invertebrates NOEC Americamysis bahia: >1000 mg/L (23 day)
Sodium benzoate	Aquatic Invertebrates NOEC Daphnia magna: 5.81 mg/L (21 d [reproduction])

Persistence and Degradability

Product Data: No data available.

Substance Data:

Name	Result
Ethane-1,2-diol	The substance is Readily biodegradable. 90-100% degradation in water, measured by DOC removal, after 10 days.
2,2' -Oxybisethanol diethylene glycol	Substance is readily biodegradable in water. (102 % degradation by DOC removal after 28 days).
Sodium benzoate	The substance is readily biodegradable. 94% degardation in water, measured by CO2 evolution, after 28 days.
Potassium p-tert-butylbenzoate	Persistence assessment based on biodegradability is not relevant for metals and their inorganic compounds such as this substance.

Name	Result
Denatonium benzoate	Not readily biodegradable; substance attained only 18% degradation after 28 days.

Bioaccumulative Potential

Product Data: No data available.

Substance Data:

Name	Result
Ethane-1,2-diol	The substance is not expected to bioaccumulate (log Pow=: -1.93).
2,2' -Oxybisethanol diethylene glycol	Bioaccumulation is not expected. BCF: 100 L/kg
Sodium benzoate	The substance is not expected to bioaccumulate (log Pow= 1.88, Read-across substance data).
Potassium p-tert-butylbenzoate	Bioaccumulation assessment using a classic BCF assessment is not considered relevant for metals and their inorganic compounds such as this substance.
Denatonium benzoate	Log Kow: 1.78

Mobility in Soil

Product Data: No data available.

Substance Data:

Name	Result
Ethane-1,2-diol	Adsorption to the solid soil phase is not expected.
2,2' -Oxybisethanol diethylene glycol	Adsorption to the solid soil phase is not expected.
Sodium benzoate	The substance is highly mobile, therefore, adsorption to soil is not expected (Koc= 7.033 L/kg, QSAR data).
Potassium p-tert-butylbenzoate	Mobility in soil assessment based on KOC/Kd values are not relevant for metals and their inorganic compounds such as this substance.
Denatonium benzoate	Substance is slightly mobile with a high potential for adsorption to soil and sediment [Koc at 20 °C: 2466].

Results of PBT and vPvB assessment

Product Data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT.

vPvB assessment: This product does not contain any substances that are assessed to be a vPvB.

Substance Data:

PBT assessment:

Ethane-1,2-diol	The substance is not PBT.
2,2' -Oxybisethanol diethylene glycol	This substance is not PBT.
Sodium benzoate	The substance is not PBT.
Potassium p-tert-butylbenzoate	PBT assessment does not apply to metals and their inorganic compounds such as this substance.
Denatonium benzoate	Substance is not PBT.

vPvB assessment:

Ethane-1,2-diol	The substance is not vPvB.
2,2' -Oxybisethanol diethylene glycol	This substance is not vPvB.
Sodium benzoate	The substance is not vPvB.

Potassium p-tert-butylbenzoate	vPvB assessment does not apply to metals and their inorganic compounds such as this substance.
Denatonium benzoate	Substance is not vPvB.

Other Adverse Effects: No data available.

SECTION 13: Disposal Considerations

Disposal Methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory agencies. Dispose of in accordance with all applicable local, regional, state and federal regulations.

Contaminated packages:

Not determined or not applicable.

SECTION 14: Transport Information

United States Transportation of Dangerous Goods (49 CFR DOT)

UN Number	3082
UN Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s Ethylene Glycol
UN Transport Hazard Class(es)	9 
Packing Group	III
Environmental Hazards	None
Special Precautions for User	None
Stowage Category	A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.
Additional Information	Non Bulk (in quantities under 5,000 lbs in any one inner package) are not regulated by DOT.

International Maritime Dangerous Goods (IMDG)

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

SECTION 15: Regulatory Information

United States Regulations

Inventory Listing (TSCA): All ingredients are listed-active or exempt.

Significant New Use Rule (TSCA Section 5): None of the ingredients are listed.

Export Notification under TSCA Section 12(b): None of the ingredients are listed.

SARA Section 302 Extremely Hazardous Substances: None of the ingredients are listed.

SARA Section 313 Toxic Chemicals:

107-21-1	Ethane-1,2-diol	Listed

CERCLA:

107-21-1	Ethane-1,2-diol	Listed	5000 lbs

RCRA: None of the ingredients are listed.

Section 112(r) of the Clean Air Act (CAA):

107-21-1	Ethane-1,2-diol	Listed

Massachusetts Right to Know:

107-21-1	Ethane-1,2-diol	Listed

New Jersey Right to Know:

107-21-1	Ethane-1,2-diol	Listed

New York Right to Know:

107-21-1	Ethane-1,2-diol	Listed

Pennsylvania Right to Know:

107-21-1	Ethane-1,2-diol	Listed
111-46-6	2,2' -Oxybisethanol diethylene glycol	Listed

California Proposition 65:

⚠**WARNING:** This product can expose you to Ethane-1,2-diol; which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Additional information: Not determined.

SECTION 16: Other Information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal 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, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 1-1-0

Initial Preparation Date: 11.22.2023

End of Safety Data Sheet