SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Ultra1Plus™ UltraCool IAT Antifreeze + Coolant CONCENTRATE, EURO-ASIAN - BLUE

Product form: Mixture
Product use: Antifreeze & Coolant
Product number(s): UACCONB

Company Identification (Details of the supplier of the safety data sheet):

Ultrachem LLC
1600 Ponce de Leon, STE 1108
Coral Gables, FL. 33134 USA
Phone +1 (888) 685-8721
www.ultra1plus.com

U1Dynamics Manufacturing LLC
4468 Genoa-Red Bluff Rd.
Houston, TX. 77059 USA
Phone +1 (786) 953 - 6132

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887

SECTION 2 HAZARDS IDENTIFICATION

GHS-US Classification:

Acute Tox. 4 (Oral)	H302
STOT RE 2	H373

Full text of H statements: see section 16.

Label elements:

Hazard pictograms (GHS-US):



GHS07



GHS08

Signal word (GHS-US): Warning

Hazard statements (GHS-US): H302 – Harmful if swallowed
H373 – May cause damage to organs (kidneys) through prolonged or repeated exposure (oral)

Precautionary statements (GFS-US): P201 – Obtain special instructions before use

P202 – Do not handle until all safety precautions have been read and understood
P260 – Do not breathe mist, spray vapors
P264 – Wash affected areas thoroughly after handling.
P270 – Do not eat, drink, or smoke when using this product
P280 – Wear personal protective equipment as required
P301+P310 – If swallowed: Immediately call doctor/physician or poison center
P301+P330+P331 – If swallowed: rinse mouth. Do NOT induce vomiting
P304+P340 – If inhaled: Remove person to fresh air and keep comfortable for breathing
P308+P313 – If exposed or concerned: Get medical advice/attention
P405 – Store locked up
P501 – Dispose of contents/container, in a safe manner, to appropriate waste disposal facility, in accordance with local/regional/national/international regulations.

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

Name	**Product Identifier**	**% by wt**	**GFS-US Classification**
Ethylene glycol	CAS No. 107-21-1	<= 99	Acute Tox. 4 (Oral) H302
Additive and Inhibitors	Trade Secret	< 4.5	Acute Tox. (Oral) H272, H319
Water Deionize	CAS No. 7732-18-5	< 1	Not Classified
Denatonium benzoate (embittering agent)	CAS-No. 3734-33-6	0.003 - 0.005 [30 - 50 ppm]	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
BLUE DYE	-	<1	Not Classified

SECTION 4 FIRST AID MEASURES

Description of first aid measures:

First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation: If breathing is difficult, remove the victim from fresh air and keep at rest in a position comfortable for breathing. Seek immediate medical advice. Allow the victim to rest. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

First-aid measures after skin contact:	Remove contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reusing. If skin irritation occurs: Rinse immediately with plenty of water (for at least 15 minutes). Get medical advice/attention. Specific treatment (see supplemental first aid instructions on this label).
First-aid measures after eye contact:	Remove contact lenses, if present and easy to do. Continue rinsing. Rinse immediately with plenty of water for 15 minutes, lifting lower and upper lids. If eye irritation persists: Rinse immediately with plenty of water. Get medical advice/attention.
First-aid measures after ingestion:	Obtain emergency medical attention. Rinse mouth. Do NOT induce vomiting. If the person is fully conscious, make him/her drink two glasses of water. Never give an unconscious person anything to drink. Call a POISON CENTER or doctor/physician if you feel unwell. If medical advice is delayed, and if the person has swallowed a moderate volume of material (a few ounces), then give three to four ounces of hard liquor, such as whiskey. For children, give proportionally less liquor, according to weight.

Most important symptoms and effects, both acute and delayed
IMMEDIATE HEALTH EFFECTS

Symptoms/injuries:	Causes damage to organs (kidneys) Oral.
Symptoms/injuries after skin contact:	Causes skin irritation.
Symptoms/injuries after eye contact:	Causes serious eye damage.
Symptoms/injuries after ingestion:	Swallowing a small quantity of this material will result in serious health hazard. The lethal dose in humans is estimated to be 100 mL (3 oz).

Indication of any immediate medical attention and special treatment needed.

A more effective intravenous antidote for physician uses is 4-methylpyrazaole, a potent inhibitor of alcohol dehydrogenases, which effectively blocks the formation of toxic metabolites of ethylene glycol. It has been used to decrease the metabolic consequences of ethylene glycol poisoning before metabolic acidosis coma, seizures, and renal failure have occurred.

SECTION 5 FIRE FIGHTING MEASURES

5.1. Extinguishing media:

Suitable extinguishing media:	Fine water spray. Alcohol-resistant foam. Foam. Carbon dioxide. Dry chemical powder. Sand. Dry powder. Water fog.
Unsuitable extinguishing media:	Do not use a heavy water stream. May spread fire.

5.2. Special hazards arising from the substance or mixture:

Fire hazard:	During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.
Reactivity:	No dangerous reactions known under normal conditions of use.

5.3. Advice for firefighters

Firefighting instructions:	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering the environment.
Protection during firefighting:	Do not enter the fire area without proper protective equipment, including respiratory protection.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedure:

For non-emergency personnel:

Emergency procedures:	Evacuate unnecessary personnel.

For emergency responders:

Protective equipment:	Equip cleanup crew with proper protection. Refer to section 8.2.
Emergency procedures:	Ventilate area.

Environmental precautions: Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

Methods and material for containment and cleaning up:

Methods for cleaning up:	Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

Reference to other sections: See Heading 8. Exposure controls and personal protection.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling:

Precautions for safe handling:	Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.
Hygiene measures:	Do not eat, drink, or smoke when using this product. Wash affected areas thoroughly after handling.

Conditions for safe storage, including any incompatibilities:

Storage conditions:	Keep only in the original container in a cool, well-ventilated place away from: Heat sources. Keep container closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies. Do not cut, drill, weld, use a blowtorch on, etc. containers even when empty. Product may become solid at temperatures below -37 ºC (-34 ºF).
Incompatible products:	Keep away from strong acids, strong bases and oxidizing agents.
Incompatible materials:	Sources of ignition.

Specific end use(s): No additional information available

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

ethylene glycol (107-21-1)

ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
ACGIH	Remark (ACGIH)	Upper Respiratory Tract (URT) & Eye irritant
OSHA	Not applicable	

Exposure controls:

Personal protective equipment: Avoid all unnecessary exposure. Gloves. Safety glasses.





Hand protection:	Wear protective gloves.
Eye protection:	Chemical goggles or safety glasses.
Respiratory protection:	If exposed to levels above exposure limits wear appropriate respiratory protection.
Other information:	Do not eat, drink or smoke during use.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Physical state:	Liquid
Color:	Blue
Odor:	Mild
Odor threshold:	No data available
Ph 50% water solution:	8
Relative evaporation rate (butylacetate=1):	Nil
Freezing point:	-18 °C (0 ºF)
Boiling point:	158 °C (317 ºF)
Flash point:	116 °C (241 ºF) [100% Ethylene Glycol] ASTM D56
Auto-ignition temperature:	400 °C (752 ºF) [100% Ethylene Glycol] Literature
Decomposition temperature:	No data available
Flammability (solid, gas):	No data available
Vapor pressure:	< 0.1 @ 20 ºC
Relative vapor density at 20 °C:	No data available
Specific Gravity:	1.12
Density:	1.12 kg/l (9.3 lbs./gal)
Solubility:	Water: Complete
Log Pow:	No data available
Log Know:	No data available
Viscosity, kinematic:	No data available
Viscosity, dynamic:	No data available
Explosive properties:	Not applicable.
Oxidizing properties:	Not applicable.
Explosive limits:	3.2 – 15.3 vol %

Other information:

VOC content:	0.00 %

SECTION 10 STABILITY AND REACTIVITY

Reactivity: No dangerous reactions known under normal conditions of use.

Chemical Stability: Stable.

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Conditions to avoid: Extremely high or low temperatures. Keep away from any flames or sparking source.

Incompatible materials: Keep away from strong acids, strong bases, and oxidizing agents.

Hazardous decomposition products: Carbon dioxide. Carbon monoxide. Fume. alcohols. Aldehydes. Ethers.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Acute toxicity: Oral: Harmful if swallowed.

Ethylene glycol (107-21-1)	
LD50 oral rat	> 5,000.00 mg/kg (Rat; Literature study)
ATE US (oral)	500.00 mg/kg bodyweight

Skin corrosion/irritation:	Not classified pH: 10.5 - 11
Serious eye damage/irritation:	Not classified pH: 10.5 - 11
Respiratory or skin sensitization:	Not classified
Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive toxicity:	Not classified
Specific target organ toxicity (single exposure):	Not classified
Specific target organ toxicity (repeated exposure):	May cause damage to organs (kidneys) through prolonged or repeated exposure (oral). May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard:	Not classified
Potential adverse human health effects and symptoms:	Based on available data, the classification criteria are not met. Harmful if swallowed.
Symptoms/injuries after skin contact:	Causes skin irritation.
Symptoms/injuries after eye contact:	Causes serious eye damage.
Symptoms/injuries after ingestion:	Swallowing a small quantity of this material will result in serious health hazard. The lethal dose in humans is estimated to be 100 mL (3 oz).

SECTION 12 ECOLOGICAL INFORMATION

Toxicity:

Ethylene glycol (107-21-1)	
EC50 Daphnia 1	> 10,000.00 mg/l (EC50; 24 h)
LC50 fish 2	40,761.00 mg/l (LC50; 96 h; Salmo gairdneri)

Persistence and degradability:

Ethylene glycol (107-21-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.
Biochemical oxygen demand (BOD)	0.47 g O2/g substance
Chemical oxygen demand (COD)	1.24 g O2/g substance
ThOD	1.29 g O2/g substance
BOD (% of ThOD)	0.36

Bio accumulative potential:

Ethylene glycol (107-21-1)	
BCF fish 1	10.00 (BCF; 72 h)
BCF other aquatic organisms 1	0.21 - 0.6 (BCF)
BCF other aquatic organisms 2	190.00 (BCF; 24 h)
Log Pow	-1.34 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Mobility in soil:

Ethylene glycol (107-21-1)	
Surface tension	0.05 N/m (20 ºC / 68 ºF)

Other adverse effects:

Effect on ozone layer: No known effect on the ozone layer

Effect on global warming: No known ecological damage caused by this product

Other information: Avoid release to the environment.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods:

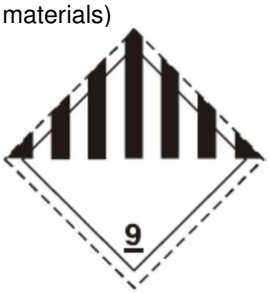
Waste disposal recommendations: Dispose of contents/container, in a safe manner, to appropriate waste disposal facility, in accordance with local/regional/national/international regulations.

Ecology - waste materials: Avoid release to the environment.

SECTION 14 TRANSPORT INFORMATION

Department of Transportation (DOT): In accordance with DOT

Transport document description:	UN3082 Environmentally hazardous substances, liquid, n.o.s., 9, III
UN-No. (DOT):	UN3082
Proper Shipping Name (DOT):	Environmentally hazardous substances, liquid, n.o.s.
Class (DOT):	9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140
Hazard labels (DOT):	9 - Class 9 (Miscellaneous dangerous materials)



Packing group (DOT):	III - Minor Danger
DOT Packaging Non-Bulk (49 CFR 173.xxx):	203
DOT Packaging Bulk (49 CFR 173.xxx):	241
DOT Symbols:	G - Identifies PSN requiring a technical name
DOT Packaging Exceptions (49 CFR 173.xxx)	155
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27):	No limit
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75):	No limit
DOT Vessel Stowage Location:	A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel
Other information:	Non-Bulk: Not regulated by the US D.O.T. (in quantities under 5,000 lbs in any one inner package).

TDG: Refer to current TDG Canada for further Canadian regulations.

Transport by sea:

Proper Shipping Name (IMDG):	Not regulated by IMDG (in quantities under 5,000 lbs in any one inner package)

Air transport:

Proper Shipping Name (IATA):	Not regulated by IATA (in quantities under 5,000 lbs in any one inner package)

SECTION 15 REGULATORY INFORMATION

US Federal regulations:

Ethylene glycol (107-21-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA
CERCLA RQ	5000 lb(s)
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Ethylene glycol is subject to Tier I and/or Tier II annual inventory reporting
SARA Section 313 - Emission Reporting	Ethylene glycol is subject to Form R Reporting requirements.

International regulations:

CANADA

WHMIS Classification



Class D Division 2
Subdivision A - Very toxic material causing other toxic effects

EU-Regulations: No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]: No additional information available

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]: Not classified.

US State regulations:

ethylene glycol (107-21-1)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	Yes	No	No	

Ethylene glycol (107-21-1)
U.S. - Massachusetts - Right to Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 OTHER INFORMATION

Full text of H-statements:

H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H373	May cause damage to organs through prolonged or repeated exposure

NFPA health hazard: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard: 1 - Must be preheated before ignition can occur.

NFPA reactivity: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

HMIS III Rating

Health: 2 Moderate Hazard - Temporary or minor injury may occur.

Flammability: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 ºF (93 ºC). (Class IIIB)

Physical: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal Protection: B - Safety glasses, Gloves

SDS GHS US (GHS HazCom 2012) OWI