UTC Aerospace Systems
Fire Protection Systems

SAFETY DATA SHEET
Water and Anti-Freeze Mixture (Pressurized with Carbon Dioxide)

1. IDENTIFICATION

Product Name	Water and Anti-Freeze Mixture (Pressurized with Carbon Dioxide)
Recommended use of the chemical and restrictions on use	
Identified uses	Fire Extinguishing Agent in portable fire extinguisher
Restrictions on Use	Avoid use on burning metals
Company Identification	UTC Aerospace Systems 4200 Airport Drive, NW Wilson, NC 27896
Customer Information Number	(252) 237-7004
Emergency Telephone Number	
3E Company	1-800-451-8346 Site Code: 33067
Issue Date	April 22, 2020
Supersedes Date	June 14, 2017, Rev C

Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2. HAZARD IDENTIFICATION

Hazard Classification
Gas under pressure – Liquefied gas
Specific Target Organ Toxicity (Repeated Exposure) – Category 2

Label Elements
Hazard Symbols


Signal Word: Warning

Hazard Statements
Contains gas under pressure; may explode if heated.
May cause damage to organs (kidney) through prolonged or repeated exposure (oral).

Precautionary Statements
Prevention
Do not breathe mist, vapors or spray.
Response
Get medical advice/attention if you feel unwell.
Storage
Protect from sunlight.
Store in well-ventilated place.
Disposal
Dispose of containers in accordance with local regulations.

Other Hazards
None identified.

2. HAZARD IDENTIFICATION

Specific Concentration Limits
The values listed below represent the percentages of ingredients of unknown toxicity.

Acute oral toxicity	0%
Acute dermal toxicity	0%
Acute inhalation toxicity	0%
Acute aquatic toxicity	0%

0. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CAS Number	Concentration
Ethylene Glycol	107-21-1	3 - 7%
Acetic Acid Potassium Salt	127-08-2	30 - 50%
Water	7732 – 18-5	42 - 69%

Note: This product uses carbon dioxide in a cartridge as the expellant.

1. FIRST- AID MEASURES

Description of necessary first-aid measures
Eyes
Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.
Skin
Wash skin thoroughly with soap and water. Obtain medical attention if irritation persists.
Ingestion
Dilute by drinking large quantities of water and obtain medical attention.
Inhalation
Move victim to fresh air. Obtain medical attention immediately for any breathing difficulty.

Most important symptoms/effects, acute and delayed
Aside from the information found under Description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed
Notes to Physicians
Treat symptomatically.

2. FIRE - FIGHTING MEASURES

Suitable Extinguishing Media
This preparation is used as an extinguishing agent and therefore is not a problem when trying to control a fire. Use extinguishing agent appropriate to other materials involved. Keep pressurized containers and surroundings cool with water spray as they may rupture or burst in the heat of a fire.

Specific hazards arising from the chemical
Pressurized containers may explode in heat of fire.

5. FIRE - FIGHTING MEASURES

Special Protective Actions for Fire-Fighters
Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Wear appropriate protective clothing. Prevent skin and eye contact.

Environmental Precautions
Prevent large quantities of the material from entering drains or watercourses.

Methods and materials for containment and cleaning up
Contain and absorb using appropriate inert material and transfer into suitable containers for recovery or disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Wear appropriate protective clothing. Prevent skin and eye contact.

Conditions for safe storage
Pressurized containers should be properly stored and secured to prevent falling or being knocked over. Do not drag, slide or roll pressurized containers. Do not drop pressurized containers or permit them to strike against each other. Never apply flame or localized heat directly to any part of the pressurized container. Store pressurized containers away from high heat sources. Storage area should be: cool - dry - well ventilated - under cover - out of direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Exposure limits are listed below, if they exist.

Ethylene Glycol
ACGIH TLV: 100 mg/m3 (ceiling) A4
OSHA PEL: 125 mg/m3 (50 ppm) – Ceiling

Appropriate engineering controls
Use with adequate ventilation. There should be local procedures for the selection, training, inspection and maintenance of this equipment.

Individual protection measures
Respiratory Protection
Respiratory protection not normally required.
Skin Protection
Gloves
Eye/Face Protection
Chemical goggles or safety glasses with side shields.
Body Protection
Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Agent

Appearance	
Physical State	Liquid
Color	Clear
Odor	Slight
Odor Threshold	No data available
pH	No data available
Specific Gravity	1.22
Boiling Range/Point (°C/F)	No data available
Melting Point (°C/F)	No data available
Flash Point (°C/F)	Not flammable
Vapor Pressure	No data available
Evaporation Rate (BuAc=1)	<1
Solubility in Water	Soluble
Vapor Density (Air = 1)	Not applicable
VOC (%)	4.8
Partition coefficient (n-octanol/water)	No data available
Viscosity	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Upper explosive limit	No data available
Lower explosive limit	No data available
Flammability (solid, gas)	Not applicable

Carbon Dioxide

Appearance	
Physical State	Liquefied gas under pressure
Color	Colorless
Odor	Odorless to Slightly Acidic
Odor Threshold	No data available
pH	Not applicable
Specific Gravity	1.522
Boiling Range/Point (°C/F)	-56.6/-69.8
Melting Point (°C/F)	-78.5/109.2 (sublimation)
Flash Point (PMCC) (°C/F)	Not flammable
Vapor Pressure	838 psig @70°F and 1 atmosphere
Evaporation Rate (BuAc=1)	No data available
Solubility in Water	Soluble
Vapor Density (Air = 1)	Heavier than air.
VOC (%)	Not applicable
Partition coefficient (n-octanol/water)	No data available
Viscosity	Not applicable
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Upper explosive limit	Not explosive
Lower explosive limit	Not explosive
Flammability (solid, gas)	Not flammable

10. STABILITY AND REACTIVITY

Reactivity
Pressurized containers may rupture or explode if exposed to heat.

Chemical Stability
Stable under normal conditions.

Possibility of hazardous reactions
Hazardous polymerization will not occur.

Conditions to Avoid
Exposure to direct sunlight

Incompatible Materials
Water reactive materials – burning metals – electronically energized equipment

Hazardous Decomposition Products
Oxides of carbon

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
Ethylene Glycol
Minimum lethal dose in humans: 1600 mg/kg body weight(estimate)
LD50 Dermal (rabbit) >3500 mg/kg

Specific Target Organ Toxicity (STOT) – single exposure
No data available.

Specific Target Organ Toxicity (STOT) – repeat exposure
Ethylene Glycol: May cause damage to organs (kidney) through prolonged or repeated exposure (oral).

Serious Eye damage/Irritation
Available data indicates this product is not expected to cause eye irritation.

Skin Corrosion/Irritation
Available data indicates this product is not expected to cause skin irritation.

Respiratory or Skin Sensitization
Available data indicates this product is not expected to cause skin sensitization.

Carcinogenicity
Not considered carcinogenic by NTP, IARC, and OSHA.

Germ Cell Mutagenicity
Available data indicates this product is not expected to be mutagenic.

Reproductive Toxicity
Available data indicates this product is not expected to cause reproductive toxicity or birth defects.

Aspiration Hazard
Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Ethylene Glycol
LC50 Pimephales promelas 72860 mg/l 96hr
EC50 Daphnia Magna >100 mg/l 48hr

Mobility in soil
No relevant studies identified.

Persistence/Degradability
No relevant studies identified.

Bioaccumulative Potential
No relevant studies identified.

Other adverse effects
No relevant studies identified.

13. DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose of container in accordance with all applicable local and national regulations. Do not cut, puncture or weld on or near to the pressurized container.

14. TRANSPORT INFORMATION

DOT CFR 172.101 Data	Carbon Dioxide, (2.2), UN1013
UN Proper Shipping Name	Carbon Dioxide
UN Class	2.2
UN Number	UN1013
UN Packaging Group	None
Classification for AIR	Consult current IATA Regulations prior to shipping by

air. **Transportation (IATA)**

15. REGULATORY INFORMATION

United States TSCA Inventory
This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Substance Inventory.

Canada DSL Inventory
All ingredients in this product have been verified for listing on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL).

SARA Title III Sect. 311/312 Categorization
Pressure Hazard, Delayed (Chronic) Health Hazard

SARA Title III Sect. 313
This product contains the following chemicals that are listed in Section 313 at or above de minimis concentrations: Ethylene glycol

15. REGULATORY INFORMATION

California Proposition 65
This product contains the following materials which the State of California has found to cause cancer, birth defects or other reproductive harm: ethylene glycol (ingested)

16. OTHER INFORMATION

NFPA Ratings
NFPA Code for Health - 1
NFPA Code for Flammability - 0
NFPA Code for Reactivity - 0
NFPA Code for Special Hazards - None
HMIS Ratings
HMIS Code for Health – 1*
HMIS Code for Flammability - 0
HMIS Code for Physical Hazard - 0
HMIS Code for Personal Protection - See Section 8
*Chronic

Legend
ACGIH: American Conference of Governmental Industrial Hygienists
CAS#: Chemical Abstracts Service Number
EC50: Effect Concentration 50%
IARC: International Agency for Research on Cancer
LC50: Lethal Concentration 50%
LD50: Lethal Dose 50%
N/A: Denotes no applicable information found or available
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
RQ: Reportable Quantity
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value
TSCA: Toxic Substance Control Act

Revision Date: April 22, 2020
Replaces: June 14, 2017, Rev C
Changes made: Revised section 3.

Information Source and References
This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.

Prepared By: EnviroNet LLC.

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