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safety data sheet

## Safety Data Sheet: Signal Chiller Fluid XL Solution

Revision Date: January 2<sup>nd</sup> 2024

### SECTION 1

### PRODUCT AND COMPANY IDENTIFICATION

#### PRODUCT

**Product Name:** Signal Chiller Fluid XL Solution

**Product Description:** Ethylene Glycol

**Intended Use:** Antifreeze/coolant

#### COMPANY IDENTIFICATION

**Supplier:** Beacon Lubricants  
P.O Box 754  
Edinboro, PA 16412

**Emergency Telephone:** 1-877-734-7334 – Beacon Lubricants, Inc.

**Emergency Telephone:** 1-800-424-9300 (24 hours) – Chemtrec approval

Website: [www.beaconlubricants.com](http://www.beaconlubricants.com)

### SECTION 2

### HAZARDS IDENTIFICATION

This material is hazardous according to regulatory guidelines (M)SDS Section 15)

#### CLASSIFICATION:

Acute oral toxicant: Category 4. Specific target organ toxicant (repeated exposure): Category 2.

#### LABEL:

##### Pictogram:



**Signal Word:** Danger

#### Hazard Statements:

H302: Harmful if swallowed. H373: May cause damage to organs through prolonged or repeated exposure. Kidney



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### Precautionary Statements:

P101: If medical advice is needed, have product container or label at hand.  
P102: Keep out of reach of children. P103: Read label before use. P260: Do not breathe mist / vapors. P264: Wash skin thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P315: Get immediate medical advice/attention. P330: Rinse mouth. P501: Dispose of contents and container in accordance with local regulations.

**Contains:** DIETHYLENE GLYCOL; ETHYLENE GLYCOL

### Other hazard information:

**HAZARD NOT OTHERWISE CLASSIFIED (HNOC):** None as defined under 29 CFR 1900.1200.

### PHYSICAL / CHEMICAL HAZARDS

No significant hazards.

### HEALTH HAZARDS

High-pressure injection under skin may cause serious damage. Ingestion may cause serious adverse effect and may be fatal. May cause kidney failure and central nervous system effects. Prolonged exposure to elevated concentrations of mist or liquid may cause irritation of the skin, eyes, and respiratory tract.

### ENVIRONMENTAL HAZARDS

No significant hazards.

**NFPA Hazard ID:** Health: 1 Flammability: 1 Reactivity: 0

**HMIS Hazard ID:** Health: 2\* Flammability: 1 Reactivity: 0

**Note:** This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

**SECTION 3****COMPOSITION / INFORMATION ON INGREDIENTS**

This material is defined as a mixture.

**Hazardous Substance(s) or Complex Substance(s) required for disclosure**

Name	CAS#	Concentration*	GHS HAZARD CODES
DIETHYLENE GLYCOL	111-46-6	1 - < 5%	H302, H373
ETHYLENE GLYCOL	107-21-1	40 - < 50 %	H302, H373

\*All Concentrations are percent by weight unless material is a gas. Gas concentration are in the percent by volume.

As per paragraph (i) of 29 CFR 1910.1200, formulation is a considered a trade secret and specific chemical identity and exact percentage (concentration) of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designated representatives in accordance with applicable provisions of paragraph (i).

**SECTION 4****FIRST AID MEASURES****INHALATION**

Immediately remove from further exposure. Get immediate medical assistance. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. Give supplemental oxygen, if available. If breathing has stopped, assist ventilation with mechanical device.

**SKIN CONTACT**

Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms form high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extend of injury.

**EYE CONTACT**

Flush thoroughly with water. If irritation occurs, get medical assistance.

**INGESTION**

Seek immediate medical attention.

**NOTE TO PHYSICIAN**

This product contains ethylene glycol and/or diethylene glycol which, if ingested, are metabolized to toxic metabolites by the enzyme alcohol dehydrogenase, for which ethanol and 4-methylpyrazole {U.S. drug name Fomepizole, trade name Antizol} are antagonists. Administration of oral or intravenous ethanol or intravenous 4-methylpyrazole may arrest further metabolism of this material and thereby ameliorate the toxicity. Use of ethanol or 4-methylpyrazole does not affect toxic metabolites that are already present and is not a substitute for hemodialysis.

**SECTION 5****FIRE FIGHTING MEASURES****EXTINGUISHING MEDIA**

**Appropriate Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

**Inappropriate Extinguishing Media:** Straight streams of water or regular foam

**FIRE FIGHTING**

**Fire Fighting Instructions:** Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

**Hazardous Combustion Products:** Smoke, Fume, Oxides of carbon, Incomplete combustion products, Aldehydes.

**FLAMMABILITY PROPERTIES**

**Flash Point [Method]:** N/D

**Flammable Limits (Approximate volume % in air):** LEL: N/D UEL: N/D

**Autoignition Temperature:** >370°C (698°F)

**SECTION 6****ACCIDENTAL RELEASE MEASURES****NOTIFICATION PROCEDURES**

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800) 424-8802.



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## PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required due to toxicity or flammability of the material. See Section 5 for firefighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgement of the emergency responders.

## SPILL MANAGEMENT

**Land Spill:** Stop leak if you can do it without risk. Do not touch or walk through spilled material. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Recover by pumping or with suitable absorbent.

**Water Spill:** Stop leak if you can do it without risk. Consult and expert. Warn other shipping. Material will sink. Remove material, as much as possible, using mechanical equipment.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

## ENVIRONMENTAL PRECAUTIONS

Remove debris in path of spill and remove contaminated debris from shoreline and water surface and dispose of according to local regulations. Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

## SECTION 7

## HANDLING AND STORAGE

### HANDLING

Avoid breathing mists or vapors. Avoid contact with skin. Prevent small spills and leakage to avoid slip hazard.

**Static Accumulator:** This material is a static accumulator.



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#### STORAGE:

Do not store in open or unlabeled containers.

### SECTION 8

### EXPOSURE CONTROLS / PERSONAL PROTECTION

#### EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit/Standard			Note	Source
DIETHYLENE GLYCOL		TWA	10 mg/m <sup>3</sup>		N/A	OARDS WEEL
ETHYLENE GLYCOL	Aerosol	Ceiling	100 mg/m <sup>3</sup>		N/A	ACGIH

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

No biological limits allocated.

#### ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions.

Control measures to consider: No special requirements under ordinary conditions of use and with adequate ventilation.

#### PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information of the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

**Respiratory Protection:** If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include: No protection is ordinarily required under normal conditions of use and with adequate ventilation.



For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filters capacity/rating may be exceeded.

**Hand Protection:** Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacture for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

If prolonged or repeated contact is likely, chemical resistant gloves are recommended. If contact with forearms is likely, wear gauntlet style gloves.

**Eye Protection:** If contact is likely, safety glasses with side shields are recommended.

**Skin and Body Protection:** Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include: If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

**Specific Hygiene Measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

### **Environmental Controls**

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

## **SECTION 9**

## **PHYSICAL AND CHEMICAL PROPERTIES**

**Note:** Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

### **GENERAL INFORMATION**



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**Physical State:** Liquid

**Color:** Blue

**Odor:** Sweet/mild

**Odor Threshold:** N/D

## IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

**Relative Density (at 15 °C):** .1.07

**Flammability (Solid, Gas):** N/A

**Flash Point [Method]** N/A

**Flammable Limits (Approximate volume % in air):** LEL: N/D UEL: N/D

**Auto ignition Temperature:** >370°C (698°F)

**Vapor Density (Air =1):** 2.1 at 101 kPa [n-butyl acetate]

**Vapor Pressure:** < 0.013 kPa (0.1 mm Hg) at 20°C

**Evaporation Rate (n-butyl acetate = 1):** N/D

**pH:** 10.5-11

**Log Pow (n-Octanol/Water Partition Coefficient):** < 2

**Solubility in Water:** Complete

**Viscosity:** N/A

**Oxidizing Properties:** See Hazards Identification Section.

## OTHER INFORMATION

**Freezing Point:** -37°C (-123456789043 m4°F)

**Melting Point:** N/D

## SECTION 10

## STABILITY AND REACTIVITY

**REACTIVITY:** See sub-sections below.

**STABILITY:** Material is stable under normal conditions

**CONDITIONS TO AVOID:** High energy sources of ignition.

**MATERIALS TO AVOID:** Strong oxidizers, strong acids

**HAZARDOUS DECOMPOSITION PRODUCTS:** Material does not decompose at ambient temperatures.

**POSSIBILITY OF HAZARDOUS REACTIONS:** Hazardous polymerization will not occur.

## SECTION 11

## TOXICOLOGICAL INFORMATION

### INFORMATION ON TOXICOLOGICAL EFFECTS



<b>Hazard Class</b>	<b>Conclusion / Remarks</b>
<b>Inhalation</b>	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on the assessment of the components.
Irritation: No end point data for material.	Negligible hazard at ambient/normal handling temperatures.
<b>Ingestion</b>	
Acute Toxicity: No end point data for material	Minimally Toxic. Based on assessment of components.
<b>Skin</b>	
Acute Toxicity: No end point data for material	Minimally Toxic. Based on assessment of components.
Skin Corrosion/Irritation: No end point data for material.	Negligible irritation to skin at ambient temperatures. Based on assessment of the components.
<b>Eye</b>	
Serious Eye Damage/Irritation: No end point data for material	May cause mild, short-lasting discomfort to eyes. Based on assessment of components.
<b>Sensitization</b>	
Respiratory Sensitization: No end point data for material	Not expected to be a respiratory sensitizer
Skin Sensitization: No end point date for material	Not expected to be a skin sensitizer. Based on assessment of the components.
<b>Aspiration:</b> Data available	Not expected to be an aspiration hazard. Based on physico-chemical properties of the materials.
<b>Germ Cell Mutagenicity:</b> No end point data for material	Not expected to be a germ cell mutagen. Based on assessment of the components.
<b>Carcinogenicity:</b> No end point data for material	Not expected to cause cancer. Based on assessment of the components.
<b>Reproductive Toxicity:</b> No end point data for material	Not expected to be a reproductive toxicant. Based on the assessment of the components
<b>Lactation:</b> No end point data for material	Not expected to cause harm to breast-fed children
<b>Specific Target Organ Toxicity (STOT)</b>	



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Single Exposure: No end point data for material	Not expected to cause organ damage from a single exposure
Repeated Exposure: No end point data for material	Not expected to cause organ damage from prolonged or repeated exposure. Based on assessment of the components.

## TOXICITY FOR SUBSTANCES

NAME	ACUTE TOXICITY
ETHYLENE GLYCOL	Oral Lethality: LD50 4700 mg/kg (Rat)

## OTHER INFORMATION

**For the product itself:** Target Organs Repeated Exposure: Kidney

### Contains:

DIETHYLENE GLYCOL (DEG): Orally, DEG is more toxic to humans than animal test data indicate. Probable lethal dose for an adult is about 50 ml (2 oz.), or 2-3 swallows. Smaller amounts may cause kidney degeneration and failure. Benign urinary bladder tumors were observed in rats, no tumors were observed in mice. ETHYLENE GLYCOL (EG): Repeated high oral exposure has caused kidney damage, neurological effects, degeneration of the liver and changes in blood chemistry and circulating blood cells in laboratory animals. Repeated overexposure has the potential to cause similar toxic effects in humans. EG causes developmental and reproductive effects at high dose levels in laboratory animals. The relevance of these findings to humans is uncertain.

**The following ingredients are cited on the lists below: None.**

--REGULATORY LISTS SEARCHED--

1 = NTP CARC

3 = IARC 1

5 = IARC 2B

2 = NTP SUS

4 = IARC 2A

6 = OSHA CARC

## SECTION 12

## ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

### ECOTOXICITY

Material — Not expected to be harmful to aquatic organisms.

### MOBILITY



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**Material-** Expected to remain in water or migrate through soil.

## **PERSISTENCE AND DEGRADABILITY**

### **Biodegradation:**

Base Oil Components— Expected to be readily biodegradable

### **Atmospheric Oxidation:**

Material—Expected to degrade rapidly in air

## **BIOACCUMULATION POTENTIAL**

Material—Potential to bioaccumulate is low.

## **SECTION 13**

## **DISPOSAL CONSIDERATIONS**

Disposal recommendations based on material as supplied. Disposal must be in accordance current applicable laws and regulations, and material characteristics at time of disposal.

### **DISPOSAL RECOMMENDATIONS**

Even though this product is biodegradable, it must not be indiscriminately discarded into the environment. Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

### **REGULATORY DISPOSAL INFORMATION**

RCRA Information: Disposal of unused product may be subject to RCRA regulations (40 CFR 261). Disposal of the used product may be also regulated due to ignitability, corrosivity, reactivity or toxicity as determined by the Toxicity Characteristic Leaching Procedure (TCLP). Potential RCRA characteristics: IGNITABILITY.

**Empty Container Warning:** Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

## **SECTION 14**

## **TRANSPORT INFORMATION**



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**LAND (DOT):**

**Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (Ethylene Glycol)

**Hazard Class & Division:** 9

**ID Number:** 3082

**Packaging Group:** III

**Product RQ:** 10526.32 LBS – ETHYLENE GLYCOL

**ERG Number:** 171

**Label(s):** 9

**Transport Document Name:** UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (Ethylene Glycol), 9, PG III, RQ

Footnote: This material is not regulated under 49 CFR when the quantity in a package is less than the Product RQ.

**LAND (TDG):** Not Regulated for Land Transport

**SEA (IMDG):** Not Regulated for Sea Transport according to IMDG-Code

**Marine Pollutant:** No

**AIR (IATA):** Not Regulated for Air Transport

**SECTION 15**

**REGULATORY INFORMATION**

**OSHA HAZARD COMMUNICATION STANDARD:** This material is considered hazardous in accordance with OSHA HazCom 2012, 29, CFR 1910. 1200.

**Complies with the following national/regional chemical inventory requirements:** AICS, DSL, ENCS, IECSC, KECI, PICCS, TSCA

**EPCRA SECTION 302:** This material contains no extremely hazards substances.

Chemical Name	CAS Number	Typical Value	Component RQ	Product RQ
ETHYLENE GLYCOL	107-21-1	40 - < 50%	5000 LBS	10526.32 LBS
ETHYLENE GLYCOL	107-21-1	40 - < 50 %	5000 LBS	10526.32 LBS



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**SARA (311/312) REPORTABLE HAZARD CATEGORIES:** Immediate Health. Delayed Health

**SARA (313) TOXIC RELEASE INVENTORY:**

Chemical Name	CAS Number	Typical Value
ETHYLENE GLYCOL	107-21-1	40 - < 50%

The following ingredients are cited on the lists below:

Chemical Name	CAS Number	List Citations
DIETHYLENE GLYCOL	111-46-6	16
ETHYLENE GLYCOL	107-21-1	1, 13, 16, 18, 19

The following ingredients are cited on the lists below: None

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P6 CARC	15 = MI 293	

Code Key: CARC=Carcinogen; REPRO=Reproductive

## SECTION 16

## OTHER INFORMATION

N/D = Not determined, N/A = Not applicable

**KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):**

H302: Harmful if swallowed; Acute Tox Oral, Cat 4

H373: May cause damage to organs through prolonged or repeated exposure; Target Organ, Repeated, Cat 2

**THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:**

Updates made in accordance with implementations of GHS requirements.  
The information and recommendations contained herein are, to the best of



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