SDS *Safety Data Sheet*

Organic Acid Heavy Duty Fully Formulated Coolant

SECTION 1: IDENTIFICATION

Product name Toxguard Fluid Technologies Organic Acid Fully Formulated Coolant

Description Nitrite Molybdate Organic Acid Heavy Duty Coolant

Supplier's details

Name Toxguard Fluid Technologies, Inc.
Address 11942 Western Ave.
Stanton, CA 90680
Telephone (714) 698-3400
Fax (714) 698-3404

Emergency phone number(s)

Professional Emergency Resource Services
Domestic Shipments: 800-633-8253
International Shipments: 8014-629-0667

SECTION 2: Hazard identification

GHS classification in accordance with OSHA (29 CFR 1910.1200)

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

GHS label elements, including precautionary statements

Pictogram

Signal word **Warning**

Hazard Statements:

Harmful if swallowed. May cause damage to organs through prolonged or repeated exposure. Central Nervous system, Kidney

Precautionary Statements:

Prevention: Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Response: IF SWALLOWED: Rinse mouth. Call a poison center or doctor/physician if you feel unwell. Get medical advice/attention if you feel unwell.

Disposal: Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

PHYSICAL / CHEMICAL HAZARDS
No significant hazards.

HEALTH HAZARDS
High-pressure injection under skin may cause serious damage. Ingestion may cause serious adverse effects 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. Excessive exposure may result in eye, skin, or respiratory irritation.

ENVIRONMENTAL HAZARDS
No significant hazards.

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

Mixtures

Hazardous components

1. Ethylene Glycol

Concentration	~50 %
CAS no.	107-21-1

2. Proprietary Additives and Inhibitors

Concentration	<4 %
CAS no.	Not Applicable

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume. As per paragraph (i) of 29 CFR 1910.1200, formulation is 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 a mechanical device.

SKIN CONTACT
Flush exposed area with water and follow by washing with soap if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment. If skin irritation persists after washing, get medical advice.

EYE CONTACT
Flush eyes with plenty of water while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision or swelling occur, transport to nearest medical facility for additional treatment. If eye irritation persists, seek medical advice.

INGESTION
DO NOT take internally. If swallowed, IMMEDIATELY contact a poison control center, emergency treatment center, or physician. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

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, alcohol-resistant foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water or Regular Foam

FIRE FIGHTING
Fire Fighting Instructions: Material is non-flammable. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

Unusual Fire Hazards: Hazardous material. Firefighters should consider protective equipment indicated in Section 8.

Hazardous Combustion Products: Aldehydes, Smoke, Fume, Oxides of carbon

FLAMMABILITY PROPERTIES

Flash Point [Method]: >260 ºF/>126.67 ºC (Pensky-Martens Closed Cup)
Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D
Autoignition Temperature: N/D

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.

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 fire fighting 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 judgment 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 an 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

Precautions for safe handling

Minimum feasible handling temperatures should be maintained. Empty containers contain product residue and may be dangerous.

Conditions for safe storage, including any incompatibilities

Periods of exposure to high temperature should be minimized. Water contamination should be avoided. Keep containers away from open flames. ETHYLENE GLYCOL BASE – Ethylene Glycol has produced birth defects in rodents. Do not store near food.

SECTION 8: Exposure controls/personal protection

Control parameters

Ethylene glycol (vapor)
TWA 100 mg/m3 (ceiling) ACGIH

Appropriate engineering controls

Provide adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Eye washes and showers for emergency use.

Eye/face protection

Chemical goggles or safety glasses with side shields if liquid contact is likely.

Skin protection

Use protective clothing which is chemically resistant to this material. Selection of protective clothing depends on potential exposure conditions and may include gloves, boots, suits and other items. The selection(s) should take into account such factors as job task, type of exposure and durability requirements. Published literature, test data and/or glove and clothing manufacturers indicate the best protection is provided by Neoprene, or Nitrile Rubber.

Body protection

Where splashing is possible, full chemically resistant protective clothing, rubber apron and boots are required.

Respiratory protection

Respiratory Protection:
If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 CFR 1910.134.

Types of respirator(s) to be considered in the selection process include:
For Mist: Air Purifying, R or P style NIOSH approved respirator.
For Vapors: Air Purifying, R or P style prefilter & organic cartridge, NIOSH approved respirator. Self-contained breathing apparatus for use in environments with unknown concentrations or emergency situations.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form	Red or Orange Liquid
Odor	Mild
pH	9.0
Freezing point	-34 ºF
Initial boiling point and boiling range	212 - 324 ºF
Flash point	> 260 ºF (PMCC)
Relative density	1.0 @ 73 ºF
Solubility(ies)	Complete (water)

SECTION 10: Stability and reactivity

Chemical stability
Stable under recommended handling and storage conditions.

Possibility of hazardous reactions
No data available.

Conditions to avoid
High temperatures above 413ºC (775ºF) (product can decompose)

Incompatible materials
Normally unreactive, but try to avoid strong oxidizers, strong acids and strong bases and high temperatures.

Hazardous decomposition products
Aldehydes, Carbon Monoxide, Carbon Dioxide, Ketones, Potassium and other unidentified organic compounds may be formed upon combustion.

SECTION 11: Toxicological information

Information on toxicological effects

Acute Toxicity
Dermal LD50 > 2 g/kg(Rabbit) Based on components(s)
Oral LD50 4700 mg/kg (Rat)

Carcinogenicity Classification
Extended Life Antifreeze/Coolant
NTP: No IARC: Not Reviewed ACGIH: No OSHA: No
Cardiovascular System
Ingestion of large doses can cause metabolic acidosis that results in cardiopulmonary effects.

Developmental Toxicity
Oral exposure of pregnant rats and mice to ethylene glycol has produced birth defects in the offspring. Delayed development and birth defects occurred in offspring of pregnant rats exposed to 2-ethylhexanoic acid in drinking water.

Kidney
Ingestion of ethylene glycol can cause bladder stones and kidney damage which can be fatal.

Liver
Prolonged and repeated ingestion of ethylene glycol has produced liver damage in rats.

Lungs
Ingestion of large doses can cause metabolic acidosis that results in cardiopulmonary effects.

Whole Animal
Orally, humans are more sensitive to ethylene glycol than rodents. The reported lethal dose range for an adult human is 1 -2 ml/kg, or 1/4 to 1/2 cup.

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

Toxicity
The toxicity of this material to aquatic organisms has not been fully evaluated. This material must not be discharged or allowed to come into contact with sewage and drainage systems and any surface water body.

Persistence and degradability
This material is expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material. The product has not been tested. The statement has been derived from the properties of the individual components.

SECTION 13: Disposal considerations

Disposal of the product
Dispose of waste in accordance with Federal, State and Local laws. Under RCRA, it is the responsibility of the user of products to determine, at the time of disposal, whether product meets RCRA criteria for hazardous waste. This is because product uses transformations, mixture, processes, etc., may render the resulting material hazardous (see waste classification). Used antifreeze recycling is recommended. Do not drain on the ground or into storm drainage systems. Do not dispose in sanitary sewer systems except where permitted by law.

Disposal of contaminated packaging
Containers should be cleaned of residual product before disposal, and disposed of in accordance with all applicable laws and regulations.

SECTION 14: Transport information

DOT (US)

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (Ethylene Glycol)
Hazard Class & Division: 9
ID Number: UN3082
Packing Group: III
Product RQ: 10416.67 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.

SECTION 15: Regulatory information

OSHA HAZARD COMMUNICATION STANDARD: This material is considered hazardous in accordance with

OSHA HazCom 2012, 29 CFR 1910.1200.

Listed or exempt from listing/notification on the following chemical inventories: AICS, DSL, ENCS, KECI, PICCS, TSCA

EPCRA SECTION 302: This material contains no extremely hazardous substances.

CERCLA:

Chemical Name	CAS Number	Typical Value	Component RQ	Product RQ
ETHYLENE GLYCOL	107-21-1	~ 50%	5000 LBS	10,000 LBS

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	~ 50%

The following ingredients are cited on the lists below:

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

--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 P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

SECTION 16: Other information

Further information/disclaimer

The information contained herein is provided in good faith and believed to be correct as of the date hereof. Toxguard makes no representation as to the comprehensiveness or accuracy of the information. This product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to ensure safe workplace operations. Please consult your local sales representative for any further information.