ToughinAL EG NF

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : ToughinAL EG NF

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Coolant.
Antifreeze

Restrictions on use : Must not come into contact with food or be consumed.

1.3. Supplier

KOST® USA, Inc.
1000 Tennessee Ave.
Cincinnati, 45229 - USA
T 1-800-661-9391 - F 1-513-492-5555
sales@kostusa.com - www.kostusa.com

1.4. Emergency telephone number

Emergency number : 1-800-424-9300
CHEMTREC (24 HOURS)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS classification

Acute toxicity (oral), Category 4 H302 Harmful if swallowed.
Specific target organ toxicity — Repeated exposure, Category 2 H373 May cause damage to organs through prolonged or repeated exposure.

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labelling

Hazard pictograms (GHS) :

Signal word (GHS) : Warning

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

Precautionary statements (GHS) : P260 - Do not breathe mist, spray, vapours.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P301+P312 - If swallowed: Call a doctor if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.
P330 - Rinse mouth.
P501 - Dispose of contents/container to Collection point.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS_US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS classification
Ethylene glycol	(CAS-No.) 107-21-1	40 - 60	Acute Tox. 4 (Oral), H302 STOT RE 2, H373

***Chemical name, CAS number and/or exact concentration have been withheld as a trade secret**

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. 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 inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

First-aid measures after skin contact : Wash with plenty of water/…. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER/doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : May cause damage to organs through prolonged or repeated exposure.

Symptoms/effects after inhalation : Inhalation may cause: irritation, coughing, shortness of breath.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

4.3. Immediate medical attention and special treatment, if necessary

All treatments should be based on observed signs and symptoms of distress in the patient.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Carbon dioxide. Dry powder. Foam. Sand. Water spray.

Unsuitable extinguishing media : None known.

5.2. Specific hazards arising from the chemical

Fire hazard : No specific fire or explosion hazard.

Reactivity : No dangerous reactions known.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Do not allow run-off from fire fighting to enter drains or water courses.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear fire/flame resistant/retardant clothing. Wear a self contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid all eye and skin contact and do not breathe vapour and mist.

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable gloves resistant to chemical penetration. Chemical goggles or safety glasses.

Emergency procedures : Ventilate area.

6.1.2. For emergency responders

Protective equipment : Wear suitable gloves. Chemical goggles or safety glasses. Where excessive vapour, mist, or dust may result, use approved respiratory protection equipment.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Absorb and/or contain spill with inert material, then place in suitable container.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Take up in non-combustible absorbent material and shove into container for disposal.

6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid breathing mist/vapour/spray. Do not eat, drink or smoke when using this product.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container closed when not in use. Keep only in the original container in a cool well ventilated place.

Incompatible products : Strong oxidizing agents. Strong acids. Strong bases.

Incompatible materials : Heat sources. Direct sunlight.

Prohibitions on mixed storage : Keep away from incompatible materials.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ethylene glycol (107-21-1)		
ACGIH	Local name	Ethylene glycol
ACGIH	ACGIH TWA (ppm)	25 ppm (V - Vapor fraction)
ACGIH	ACGIH STEL (mg/m³)	10 mg/m³ (I - Inhalable particulate matter, H - Aerosol only)
ACGIH	ACGIH STEL (ppm)	50 ppm (V - Vapor fraction)
ACGIH	ACGIH Ceiling (mg/m³)	100 mg/m³
ACGIH	ACGIH Ceiling (ppm)	39.4 ppm
ACGIH	Remark (ACGIH)	TLV® Basis: URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
ACGIH	Regulatory reference	ACGIH 2020
NIOSH	NIOSH REL (ceiling) (ppm)	50 ppm

8.2. Appropriate engineering controls

Appropriate engineering controls : Avoid creating mist or spray. Avoid splashing. Either local exhaust or general room ventilation is usually required.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear suitable gloves resistant to chemical penetration. Nitrile rubber gloves

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

In case of inadequate ventilation wear respiratory protection. Use an approved respirator equipped with oil/mist cartridges.

Other information:

Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : red Yellow

Odour : No data available

Odour threshold : No data available

pH : 8.4 – 8.6

Melting point : No data available

Freezing point : -36 – -19 °C

Boiling point : 108 – 158 °C

Flash point	:	≥ 116 °C
Relative evaporation rate (butylacetate=1)	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	1.08 – 1.131
Solubility	:	No data available
Log Pow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive limits	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Avoid excessive heat or cold. Keep away from sources of ignition.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizers.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Harmful if swallowed.
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

ATE (oral)	1009.732 mg/kg bodyweight

Ethylene glycol (107-21-1)	
LD50 dermal rat	> 3500 mg/kg (mouse)
LC50 inhalation rat (mg/l)	> 2.5 mg/l/4h
ATE (oral)	500 mg/kg bodyweight

Skin corrosion/irritation	:	Not classified
Serious eye damage/irritation	:	Not classified
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
STOT-single exposure	:	Not classified
STOT-repeated exposure	:	May cause damage to organs through prolonged or repeated exposure.

Ethylene glycol (107-21-1)	
LOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight/day
NOAEL (oral, rat, 90 days)	150 mg/kg bodyweight/day kidney
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Likely routes of exposure : Skin and eye contact. Inhalation.

Symptoms/effects : May cause damage to organs through prolonged or repeated exposure.

Symptoms/effects after inhalation : Inhalation may cause: irritation, coughing, shortness of breath.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No ecotoxicological data about this product are known.

Ethylene glycol (107-21-1)	
LC50 fish 1	72860 mg/l Pimephales promelas
EC50 crustacea	> 100 mg/l
NOEC chronic fish	15380 mg/l Pimephales promelas
NOEC chronic crustacea	8590 mg/l Ceriodaphnia sp.

12.2. Persistence and degradability

ToughinAL EG NF	
Persistence and degradability	Not established.

Ethylene glycol (107-21-1)	
Persistence and degradability	Readily biodegradable.
Biodegradation	> 60 % 28 d

12.3. Bioaccumulative potential

ToughinAL EG NF	
Bioaccumulative potential	Not established.

Ethylene glycol (107-21-1)	
Log Pow	- 1.36
Bioaccumulative potential	Not expected to bioaccumulate.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Sewage disposal recommendations : Do not dispose of waste into sewer.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : RQ, UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Ethylene Glycol), 9, III

UN-No.(DOT) : UN3082

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

Transport hazard class(es) (DOT) : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140

Packing group (DOT) : III - Minor Danger
Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials)

DOT Symbols : G - Identifies PSN requiring a technical name
Other information : RQ >= 5,477 lbs.

Transport by sea

Not regulated.

Air transport

Not regulated.

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Ethylene glycol	CAS-No. 107-21-1	40 - 60%

Ethylene glycol (107-21-1)	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a final TSCA section 4 test rule.
CERCLA RQ	5000 lb

15.2. International regulations

CANADA

Ethylene glycol (107-21-1)
Listed on the Canadian DSL (Domestic Substances List) inventory.

EU-Regulations

Ethylene glycol (107-21-1)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Ethylene glycol (107-21-1)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the AICS (Australian Inventory of Chemical Substances) Listed on Taiwan National Chemical Inventory Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on KECL/KECI (Korean Existing Chemicals Inventory)

15.3. US State regulations

⚠ **WARNING:** This product can expose you to Ethylene glycol, 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.

Component	Carcinogenicity	Developmental toxicity	Reproductive toxicity male	Reproductive toxicity female	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Ethylene glycol(107-21-1)		X				8700 µg/day (oral)

Component	State or local regulations
Ethylene glycol(107-21-1)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Disclaimer:
Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

End-use applications **NOT** supported by Kost USA, Inc. for monoethylene glycol, diethylene glycol and triethylene glycol. These limitations include products restricted by law, applications in which may raise unacceptable risks, and other applications which Kost USA, Inc. has decided not to, including minimizing unnecessary risk and liabilities to the company. Kost USA, Inc. does not knowingly market these products into these non-supported applications. This list is not all-inclusive, and Kost USA, Inc. reserves the right to modify the same at any time.

- The use of production of tobacco and in the manufacture of tobacco products (including but not limited to additives, humectants, filters, inks, and paper)
- The use for the generation of artificial smoke / theatrical fogs / mist. This includes applications such as artificial / e-cigarettes.
- The use as ingredient in fuel for warming foods (Sterno™-like application) or in fuel for heating an enclosed space where human exposure is possible.
- The use in fire extinguishing sprinkler systems.
- The use in the manufacture of munitions.
- The use in the production of de-icers for use on roadways, sidewalks and in aircraft lavatories.
- The use as a component of heat transfer fluids in systems where the heat transfer fluids could infiltrate (i.e., via an exchanger leak, backflow prevention failure, or other means) a potable water.
- The use as a non-reacted component in a formulation for direct internal or external human / animal contact, including, but not limited to ingestion, inhalation, and skin contact and in medical / veterinary devices and medial / veterinary. Examples of some such applications are uses as a direct component in foods, beverages, pharmaceuticals, cosmetics, personal care products or children's products.
- The use for consumer or hospital usage for deodorizing or air "purifying" purposes by spraying as an aerosol.
- The use as a non-reacted component in adhesives, plasticizers, and softening agents for packaging having direct contact with food or beverage.
- The use as a non-reacted component in the formulation of glues, pastes, ice / heat packs or other items where the potential for significant human contact and/or ingestion exists (including but not limited to children's school glue/paste or arts/craft glue/paste, toys, children products).
- The use as a fluid for pressure testing piping.

For more information contact your Kost USA, Inc. representative.

Data sources : ESIS (European chemincal Substances Information System; accessed at: http://esis.jrc.ec.europa.eu/index.php?PGM=cla. European Chemicals Agency (ECHA) Registered Substances list. Accessed at http://echa.europa.eu/. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition. OSHA 29CFR 1910.1200 Hazard Communication Standard. TSCA Chemical Substance Inventory. Accessed at http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html. United Nations Economic Commission for Europe: About the GHS. Accessed at http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html.

Other information : None.

Full text of H-statements:

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

Abbreviations and acronyms:

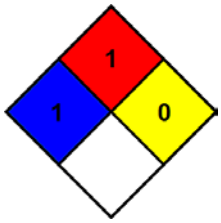
	ACGIH (American Conference of Government Industrial Hygienists)
	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	CLP: Classification, Labelling, Packaging.
	LD50: Lethal Dose for 50% of the test population

	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals
	OSHA: Occupational Safety & Health Administration
	TSCA: Toxic Substances Control Act
	STEL: Short Term Exposure Limits
	TWA: Time Weighted Average

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

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



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