

## SECTION 1: Identification

### 1.1. Identification

Product form : Mixture  
Product name : Toughinal EG HD Industrial Coolant Conc, 50/50, 30/70

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Coolant.  
Heat transfer fluid  
Restrictions on use : No additional information available

### 1.3. Details of the supplier of the safety data sheet

KOST@ USA, Inc.  
1000 Tennessee Ave.  
Cincinnati, 45229 - USA  
T 1-800-661-9391 - F 1-513-492-5555  
[sales@kostusa.com](mailto:sales@kostusa.com) - [www.kostusa.com](http://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-US classification

Acute toxicity (oral), Category 4 H302  
Reproductive toxicity, Category 1B H360  
Specific target organ toxicity — Repeated exposure, Category 2 H373

Full text of H statements : see section 16

### 2.2. Label elements

#### GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Danger  
Contains : Ethylene glycol; sodium nitrite; sodium nitrate; sodium tolyltriazole; Lithium hydroxide hydrate; Methanol; denatonium benzoate; Borax decahydrate  
Hazard statements (GHS-US) : H302 - Harmful if swallowed  
H360 - May damage fertility or the unborn child  
H373 - May cause damage to organs through prolonged or repeated exposure  
Precautionary statements (GHS-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, vapours  
P264 - Wash hands thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P280 - Wear eye protection, protective gloves, protective clothing  
P301+P312 - If swallowed: Call a doctor, a POISON CENTER if you feel unwell  
P308+P313 - If exposed or concerned: Get medical advice/attention  
P314 - Get medical advice/attention if you feel unwell  
P330 - Rinse mouth  
P405 - Store locked up  
P501 - Dispose of contents/container to Collection point

### 2.3. Other hazards

No additional information available

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### 2.4. Unknown acute toxicity (GHS US)

0.01% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)

1.54% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)

1.54% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Ethylene glycol	(CAS-No.) 107-21-1	25 – 95	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
sodium benzoate	(CAS-No.) 532-32-1	0.5 – 2	Eye Irrit. 2A, H319
Borax decahydrate	(CAS-No.) 1303-96-4	0.5 – 1	Repr. 1B, H360

\*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 : Get medical advice/attention if you feel unwell. Never give anything by mouth to an unconscious person.
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : Gently wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Get immediate medical advice/attention.

### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects : Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.
- Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry chemical. Carbon dioxide. Sand. Water spray. Water fog.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Thermal decomposition may produce : Carbon oxides (CO, CO<sub>2</sub>). Nitrogen oxides.
- Explosion hazard : Product is not explosive.
- Reactivity : No dangerous reactions known.

### 5.3. Advice for firefighters

- 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. Use 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 : Chemical goggles or safety glasses. Wear suitable protective clothing and gloves.
- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Chemical goggles or safety glasses. Wear suitable protective clothing and gloves.

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Emergency procedures : Stop leak if safe to do so. Ventilate area.

### 6.2. Environmental precautions

Do not discharge into drains or the environment. Prevent entry to sewers and public waters.

### 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. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

### 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 : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing mist, vapours.

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 : Do not store near food, foodstuffs, drugs, or potable water supplies.

Incompatible products : Strong acids. Strong bases. Strong oxidizers.

Incompatible materials : Sources of ignition.

Prohibitions on mixed storage : Incompatible materials.

Storage area : Store in dry, cool, well-ventilated area.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Ethylene glycol (107-21-1)		
ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup>
ACGIH	ACGIH Ceiling (ppm)	39.4 ppm
ACGIH	Remark (ACGIH)	Kidney dam; URT & eye irr
NIOSH	NIOSH REL (ceiling) (ppm)	50 ppm
sodium benzoate (532-32-1)		
Not applicable		
Borax decahydrate (1303-96-4)		
Not applicable		

### 8.2. Exposure controls

Appropriate engineering controls : Avoid creating mist or spray. Ensure good ventilation of the work station.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear suitable gloves resistant to chemical penetration.

Eye protection : In case of splashing or aerosol production: protective goggles.

Skin and body protection : Long sleeved protective clothing.

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

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : Blue Green

Odour : characteristic

Odour threshold : No data available

pH : 8 - 8.8

Melting point : No data available

Freezing point : -37 °C

Boiling point : 109 °C

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Flash point	: > 116 °C
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapour pressure	: < 0.1 mm Hg @ 20 °C
Relative density	: 1.05 - 1.14 @ 20 °C
Relative vapour density at 20 °C	: No data available
Solubility	: Water: 100 %
Log Pow	: No data available
Auto-ignition temperature	: 427 °C
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 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 under normal conditions.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Heat.

### 10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizers.

### 10.6. Hazardous decomposition products

Thermal decomposition generates : Nitrogen oxides. Carbon oxides (CO, CO<sub>2</sub>). alcohols. ammonia. Aldehydes. Ethers.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Likely routes of exposure : Inhalation; Skin and eye contact

Acute toxicity : Oral: Harmful if swallowed.

Toughinal EG HD Industrial Coolant Conc, 50/50, 30/70	
ATE US (oral)	522.3888444728 mg/kg bodyweight
Ethylene glycol (107-21-1)	
LD50 oral rat	500 mg/kg
LD50 dermal rat	> 3500 mg/kg mouse
LC50 inhalation rat (mg/l)	> 2.5 mg/l/4h
ATE US (oral)	500 mg/kg bodyweight
sodium benzoate (532-32-1)	
LD50 oral rat	3140 mg/kg bodyweight
ATE US (oral)	3140 mg/kg bodyweight
Borax decahydrate (1303-96-4)	
LD50 oral rat	5666 mg/kg
LD50 dermal rabbit	> 10000 mg/kg
ATE US (oral)	5666 mg/kg bodyweight
Skin corrosion/irritation	: Not classified

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Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

### Borax decahydrate (1303-96-4)

National Toxicology Program (NTP) Status	Not listed in carcinogenicity class
Reproductive toxicity	: May damage fertility or the unborn child.
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (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

Aspiration hazard	: Not classified
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

#### Ethylene glycol (107-21-1)

LC50 fish 1	72860 mg/l Pimephales promelas
EC50 Daphnia 1	> 100 mg/l
NOEC chronic fish	15380 mg/l Pimephales promelas
NOEC chronic crustacea	8590 mg/l Ceriodaphnia sp.

#### sodium benzoate (532-32-1)

LC50 fish 1	484 mg/l 96 h
EC50 Daphnia 1	> 100 mg/l 96 h

### 12.2. Persistence and degradability

#### Toughinal EG HD Industrial Coolant Conc, 50/50, 30/70

Persistence and degradability	Readily biodegradable.
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#### Ethylene glycol (107-21-1)

Persistence and degradability	Readily biodegradable.
Biodegradation	> 60 % 28 d

### 12.3. Bioaccumulative potential

#### Toughinal EG HD Industrial Coolant Conc, 50/50, 30/70

Bioaccumulative potential	Does not bioaccumulate significantly.
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#### Ethylene glycol (107-21-1)

Log Pow	- 1.36
Bioaccumulative potential	Not expected to bioaccumulate.

### 12.4. Mobility in soil

#### Toughinal EG HD Industrial Coolant Conc, 50/50, 30/70

Ecology - soil	Dissolves in water. If products enter soil, will be highly mobile and may contaminate ground water.
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### 12.5. Other adverse effects

Effect on the global warming	: No known effects from this product.
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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Sewage disposal recommendations	: Do not dispose of waste into sewer.
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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 substances, liquid, n.o.s. (Ethylene Glycol), 9, III

UN-No.(DOT) : UN3082

Proper Shipping Name (DOT) : Environmentally hazardous substances, 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)



Other information : RQ >= 5,279 lbs; 9,989 lbs; 16,139 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	30.993605 - 94.7381%
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Ethylene glycol (107-21-1)	
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
SARA Section 313 - Emission Reporting	>95%

#### 15.2. International regulations

##### CANADA

Ethylene glycol (107-21-1)
Listed on the Canadian DSL (Domestic Substances List) inventory.
sodium benzoate (532-32-1)
Listed on the Canadian DSL (Domestic Substances List) inventory.
Borax decahydrate (1303-96-4)
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)
sodium benzoate (532-32-1)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Borax decahydrate (1303-96-4)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

##### National regulations

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### 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 KECI (Korean Existing Chemicals Inventory)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

### sodium benzoate (532-32-1)

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

### Borax decahydrate (1303-96-4)

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

### 15.3. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, developmental and/or reproductive harm

#### 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	No significant risk level (NSRL)
No	Yes	No	No	

#### 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

#### Borax decahydrate (1303-96-4)

U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

## 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.

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- 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 chemical Substances Information System; accessed at: <http://esis.jrc.ec.europa.eu/index.php?PGM=cla>.  
ACGIH 2000.  
European Chemicals Agency (ECHA) Registered Substances list. Accessed at <http://echa.europa.eu/>.  
Kristen 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>.

Other information : None.

Full text of H-statements:

H302	Harmful if swallowed
H319	Causes serious eye irritation
H360	May damage fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure

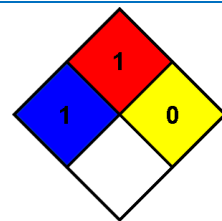
Abbreviations and acronyms:

	ACGIH (American Conference of Government Industrial Hygienists)
	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	CLP: Classification, Labelling, Packaging.
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population
	OSHA: Occupational Safety & Health Administration
	STEL: Short Term Exposure Limits
	TSCA: Toxic Substances Control Act
	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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