

# Safety Data Sheet

SDS Number: 1031012530CONC

Issue Date: 11/20/2017

Revised Date: 4/1/2019

Version No: 2



## 1. IDENTIFICATION

**Product Name:** TEC-KOOL Defense Gold Concentrate Antifreeze  
**Chemical Name/Synonyms:** TEC-KOOL Defense Gold Global Light-Duty Extended Life Concentrate  
**Company Name & Address:** Tec-Kool, 1320 1st Street, Rock Island, IL 61201  
**For More Information Call:** (309) 788-5631 (Monday-Friday 8:00-4:30)  
**In Case of Emergency Call:** (800) 424-9300 Chemtrec (24 Hours/7 Days)

## 2. HAZARD(S) IDENTIFICATION

### Hazard Classification:

**Hazard Class :** **Category:** **Hazard Statement:**

Hazard Class :	Category:	Hazard Statement:
Harmful if swallowed	4	H302
Causes eye irritation	2B	H320
May cause damage to organs through prolonged or repeated exposure	2	H373

See section 16 for full list of H statements.

**Signal Word:** Warning

### Hazard Statement(s):

H302 Harmful if swallowed.

H320 Causes eye irritation.

H373 May cause damage to organs through prolonged or repeated exposure

**Pictogram(s):**



**Precautionary Statement(s):**

- P264 Wash hands thoroughly after handling.
- P270 Do not eat, drink, or smoke when using this product.
- P280 Wear personal protective equipment as required
- P301+P312 IF SWALLOWED: Call poison center/doctor if you feel unwell.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.
- P337+P313 Rinse mouth.
- P501 If eye irritation persists: Get medical advice/attention.

**Description of Other Hazards:**

N/A

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Substance:**

Chemical Name	CAS#	% By Weight	GHS-US
N/A			

The exact concentrations of ingredients are considered proprietary and are being withheld as a Trade Secret in accordance with paragraph (i) of §1910.1200. In addition, there is batch-to-batch variability in ingredient concentrations.

**Mixture:**

Chemical Name	CAS#	% By Weight	GHS-US
Ethylene Glycol	107-21-1	90-97	H302
Dye	N/A	<1	N/A

Denatonium Benzoate	3734-33-6	<1	H302,H315,H319,H335
Methyl-oxirane	9003-11-6	<1	N/A
Deionized Water	7732-18-5	<4	Not Classified

## 4. FIRST-AID MEASURES

### 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 breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice. If not breathing, give artificial respiration.

#### First-Aid Measures after Skin Contact:

Remove contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Rinse immediately with plenty of water (for at least 15 minutes). Get medical advice/attention.

#### First-Aid after Eye Contact:

Rinse immediately with plenty of water for 15 minutes, lifting lower and upper lids. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.

#### First-Aid after ingestion:

Obtain emergency medical attention. Rinse mouth.

DO NOT INDUCE VOMITING! If the person is fully conscience, make him/her drink two glasses of water. Never give an unconscience person anything to drink. Call a POISON CENTER or doctor if you feel unwell. If medical advice is delayed, and if the person has swallowed a moderate volumn of material, then give three to four ounces of hard liquor, such as whisky. For children, give proportionally less, according to weight.

**Most Important symptoms and effects, both acute and delayed:**

- Symptoms:** Causes damage to organs (kidneys).
- Symptoms after skin contact:** Causes skin irritation.
- Symptoms after eye contact:** Causes serious eye damage.
- Symptoms after ingestion:** Swallowing a small quantity of this material will result in serious health hazard.

**5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Agents:** Water fog. Alcohol-resistant foam. Foam. Carbon dioxide. Dry chemical powder. Sand. Fine water spray.

**Unsuitable Extinguishing Agents:** Do not use a heavy water stream. May spread fire.

**Protective Equipment/Precautions for Firefighters:**

Do not release runoff from fire control methods to sewers or waterways. Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full

face piece operated in pressure-demand or positive-pressure mode. Full protective equipment including self-contained breathing apparatus should be used during a fire. During emergency conditions, over-exposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Seek medical attention.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment:**

See section 8 for recommendations on the use of personal protective equipment.

**Measures for Environmental Protection:**

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

**Measures for Cleaning/Collecting:**

Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling:**

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

**Conditions for Safe Storage, Including any Incompatibilities:**

Keep only in the original container in a cool, well ventilated place away from: Heat sources. Keep container closed when not in use. Product may become solid at temperatures below -18 C. Keep away from strong acids, strong bases and oxidizing agents.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control Parameters:**

Component	Exposure Limits	Basis	Entity
Ethylene Glycol	10 mg/m <sup>3</sup>	STEL	ACGIH
	N/A	STEL	OSHA

TWA: Time weighted average over 8 hours of work.

TLV: Threshold limit value over 8 hours of work.

REL: Recommended exposure limit.

PEL: Permissible exposure limit.

STEL: Short term exposure limit during x minutes.

IDLH: Immediately dangerous to life or health.

WEEL: Workplace environmental exposure levels.

CEIL: Ceiling.

**Exposure Controls:**

**Personal Protective Equipment:** Avoid all unnecessary exposure. Gloves. Safety glasses.

**Breathing Equipment:** Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.

**Protection of Hands:** Wear protective gloves.

**Eye Protection:** Wear chemical safety glasses or goggles, and face shield.

**Additional Recommendations:** N/A

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Basic Physical and Chemical Properties:**

Physical State:	Liquid
Color:	Gold
Odor:	Mild
Odor Threshold:	No Data Available
pH 50% Water Solution:	8.0 - 9.5
Freezing Point:	-12.9°C (8.8°F)
Boiling Point:	162°C (325°F)
Flash Point:	116°C (241°F)
Evaporation Rate:	Nil
Flammability:	No Data Available
Auto-Ignition Temperature:	No Data Available
Decomposition Temperature:	No Data Available
Vapor Pressure:	<.1 mm Hg @ 20°C
Vapor Density:	2.1 (air=1)
Solubility:	Water: Complete
Specific Gravity:	1.12
Viscosity, Kinematic:	No Data Available
Viscosity, Dynamic:	No Data Available

**10. STABILITY AND REACTIVITY**

**Reactivity:** No dangerous reactions known under normal conditions of use.

**Chemical Stability:** Stable

**Conditions to Avoid:** Extremely high or low temperatures.

**Incompatible Materials:** Keep away from strong acids, strong bases, and oxidizing agents.

**Hazardous Decomposition Products:** Carbon dioxide. Carbon monoxide. Fume. Ethers. Aldehydes. Alcohols.

**11. TOXICOLOGICAL INFORMATION**

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### Acute Toxicity:

	<u>Ethylene Glycol (107-21-1)</u>	<u>Denatonium Benzoate (3734-33-6)</u>
Skin:	LD50 Dermal - rabbit - 10,626 mg/kg	Skin: LD50 Dermal - rabbit - > 2000 mg/kg
Eyes:	Eyes - rabbit - Mild eye irritation - 24 h	Eyes: Not Available
Inhalation:	Not Available	Inhalation: Not Available
Ingestion:	LD50 Oral - rat - 4,700 mg/kg	Ingestion: LD50 Oral - rat - 584 mg/kg

### Potential Routes of Exposure/Potential Health Effects:

Skin:	Causes skin irritation	Skin:	
Eye:	Causes serious eye damage	Eye:	
Inhalation:	Not Classified	Inhalation:	
Ingestion:	Swallowing a small quantity can result in serious health hazard. The lethal dose in humans is estimated to be 100 ml (3 oz)	Ingestion:	
Carcinogenic		Carcinogenic	
Effects:		Effects:	
Mutagenic		Mutagenic	
Effects:		Effects:	
Reproductive		Reproductive	
Toxicity:		Toxicity:	
Sensitization:		Sensitization:	
Target Organs:		Target Organs:	

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	Aquatic Vertebrate:	LC50 - Oncorhynchus mykiss (rainbow trout) - 18,500 mg/l - 96 h
		LC50 - Leuciscus idus (Golden orfe) - > 10,000 mg/l - 48 h
		NOEC - Pimephales promelas (fathead minnow) - 32,000 mg/l - 7 d
		NOEC - Pimephales promelas (fathead minnow) - 39,140 mg/l - 96 h
	Aquatic Invertebrate:	EC50 - Daphnia magna (Water flea) - 74,000 mg/l - 24 h
		NOEC - Daphnia - 24,000 mg/l - 48 h



LC50 - Daphnia magna (Water flea) - 41,000 mg/l - 48 h

Terrestrial: Not Available

Mobility: Not Available

Biodegradation: Biodegradeable

Bioaccumulation: Not Available

### 13. DISPOSAL CONSIDERATIONS

#### Waste Treatment Methods:

Waste: Dispose of contents/container, in a safe manner, to appropriate waste disposal facility, in accordance with local/regional/national/international regulations.

Ecology-waste materials: Avoid release to the environment

### 14. TRANSPORT INFORMATION

#### Department of Transportation (DOT):

Transport Document Description: UN3082 Environmentally hazardous substances, liquid, n.o.s., 9, III

UN-No.: UN3082

Proper Shipping Name: Environmentally hazardous substances, liquid, n.o.s.

Hazard Class: 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173. 140

Hazard Labels: 9 - Class 9 (Miscellaneous dangerous mate



Packing Group: III - Minor Danger

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Packaging Non-bulk: 203  
Packaging Bulk: 241  
Symbols: G - Identifies PSN requiring a technical name  
Packaging Exceptions: 155  
Quantity Limits: No Limit  
Vessel Stowage: A - May be stowed "on deck" or "under deck" on a vessel

**TDG:** Refer to current TDG Canada for further Canadian regulations

**Maritime Transport IMDG:** Not regulated by IMDG (in quantities under 5000 lbs in any one inner package)

**Air Transport ICAO-TI and IATA-DGR:** Not regulated by IATA (in quantities under 5000 lbs in any one inner package)

**Land Transport ADR/RID:** Non Bulk: not regulated by the U.S. DOT (in quantities under 5000 lbs in any one inner package)

## 15. REGULATORY INFORMATION

### U.S. Federal Regulations:

TSCA Inventory Status: Ingredients listed on TSCA inventory  
DSCL(EEC): Ingredients listed on DSCL inventory  
SARA 302: Not listed  
SARA 304: Not listed  
SARA 311: Immediate (acute) health hazard  
SARA 312: Delayed (chronic) health hazard  
SARA 313: Ethylene glycol is subject to Form R reporting

### International Regulations:

Canada WHMIS: Class D-2A: Poisonous and infectious material- Other effects- Very toxic  
Class D-1B: Poisonous and infectious material- Immediate and serious effects- Toxic

EU: No Information available

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## U.S. State Regulations:

California **WARNING:** This product contains, or may contain, substance(s) known  
Prop 65: to the State of California to cause cancer, developmental toxicity and/or  
reproductive toxicity:



**Substance:** Ethylene Glycol (107-21-1)

Carcinogens List: No

Developmental Toxicity: Yes

Male Reproductive Toxicity: No

Female Reproductive Toxicity: No

Non-Significant Risk Level (NSRL): N/A

Please refer to Sections 2, 8, and 11 for health & exposure risks, for more information,

see: [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

### Others:

Massachusetts Right to know list: Listed

New Jersey Right to know hazardous substance list: Listed

Pennsylvania Right to know list - environmental hazard list: Listed

## 16. OTHER INFORMATION

### NFPA

**Health Hazard:** 1-Exposure could cause irritation but only minor residual injury even if no treatment given.

**Fire Hazard:** 1-Must be preheated before ignition can occur.

**Reactivity:** 0-Normally stable, even under fire exposure conditions, and are not reactive with water.

**NS Symbol:** N/A



Full text of H statements:

### Physical Hazards:

Code:	Phrase:
H200:	Unstable explosive
H201:	Explosive; mass explosion hazard
H202:	Explosive; severe projection hazard
H203:	Explosive; fire, blast or projection hazard
H204:	Fire or projection hazard
H205:	May mass explode in fire
H206:	Fire, blast or projection hazard: increased risk of explosion if desensitizing agent is reduced
H207:	Fire or projection hazard: increased risk of explosion if desensitizing agent is reduced

### Health Hazards (Cont.):

Code:	Phrase:
H300:	Fatal if swallowed.
H301:	Toxic if swallowed
H302:	Harmful if swallowed
H303:	May be harmful if swallowed
H304:	May be fatal if swallowed and enters airways
H305:	May be harmful if swallowed and enters airways
H310:	Fatal in contact with skin
H311:	Toxic in contact with skin
H312:	Harmful in contact with skin
H313:	May be harmful in contact with skin

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H208: Fire hazard: increased risk of explosion if desensitizing agent is reduced	H314: Causes severe skin burns and eye damage
H220: Extremely flammable gas	H315: Causes skin irritation
H221: Flammable gas	H316: Causes mild skin irritation
H222: Extremely flammable aerosol	H317: May cause an allergic skin reaction
H223: Flammable aerosol	H318: Causes serious eye damage
H224: Extremely flammable liquid and vapour	H319: Causes serious eye irritation
H225: Highly flammable liquid and vapour	H320: Causes eye irritation
H226: Flammable liquid and vapour	H330: Fatal if inhaled
H227: Combustible liquid	H331: Toxic if inhaled
H228: Flammable solid	H332: Harmful if inhaled
H229: Pressurized container: may burst if heated	H333: May be harmful if inhaled
H230: May react explosively even in the absence of air	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled
H231: May react explosively even in the absence of air at elevated pressure and/or temperature	H335: May cause respiratory irritation
H232: May ignite spontaneously if exposed to air	H336: May cause drowsiness or dizziness
H240: Heating may cause an explosion	H340: May cause genetic defects
H241: Heating may cause a fire or explosion	H341: Suspected of causing genetic defects
H242: Heating may cause a fire	H350: May cause cancer
H250: Catches fire spontaneously if exposed to air	H351: Suspected of causing cancer
H251: Self-heating; may catch fire	H360: May damage fertility or the unborn child
H252: Self-heating in large quantities; may catch fire	H361: Suspected of damaging fertility or the unborn child
H260: In contact with water releases flammable gases which may ignite spontaneously	H361d: Suspected of damaging the unborn child
H261: In contact with water releases flammable gas	H361e: May damage the unborn child
H270: May cause or intensify fire; oxidizer	H361f: Suspected of damaging fertility
H271: May cause fire or explosion; strong oxidizer	H361g: may damage fertility
H272: May intensify fire; oxidizer	H362: May cause harm to breast-fed children
H280: Contains gas under pressure; may explode if heated	H370: Causes damage to organs
H281: Contains refrigerated gas; may cause cryogenic burns or injury	H371: May cause damage to organs
H290: May be corrosive to metals	H372: Causes damage to organs through prolonged or repeated exposure
	H373: May cause damage to organs through prolonged or repeated exposure
	H300+H310: Fatal if swallowed or in contact with skin
	H300+H330: Fatal if swallowed or if inhaled
	H310+H330: Fatal in contact with skin or if inhaled
	H300+H310+H330: Fatal if swallowed, in

### **Environmental Hazards:**

**Code:**                    **Phrase:**

H400: Very toxic to aquatic life

H401: Toxic to aquatic life

H402: Harmful to aquatic life

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H410: Very toxic to aquatic life with long-lasting effects

H411: Toxic to aquatic life with long-lasting effects

H412: Harmful to aquatic life with long-lasting effects

H413: May cause long-lasting harmful effects to aquatic life

H420: Harms public health and the environment

by destroying ozone in the upper atmosphere

H433: Harmful to terrestrial vertebrates

### **Health Hazards:**

**Code:**                      **Phrase:**

H313+H333: May be harmful in contact with skin or if inhaled

H303+H313+H333: May be harmful if swallowed, in contact with skin or if inhaled

H315+H320: Causes skin and eye irritation

contact with skin or if inhaled

H301+H311: Toxic if swallowed or in contact with skin

H301+H331: Toxic if swallowed or if inhaled

H311+H331: Toxic in contact with skin or if inhaled

H301+H311+H331: Toxic if swallowed, in contact with skin or if inhaled

H302+H312: Harmful if swallowed or in contact with skin

H302+H332: Harmful if swallowed or if inhaled

H312+H332: Harmful in contact with skin or if inhaled

H302+H312+H332: Harmful if swallowed, in contact with skin or if inhaled

H303+H313: May be harmful if swallowed or in contact with skin

H303+H333: May be harmful if swallowed or if inhaled

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