

## DefendAL Heavy Duty Extended Life Coolant / Antifreeze

MSDS Number: 9033

Revision Date: 3/9/2012

Page 1 of 6

<b>1</b>	<b>PRODUCT AND COMPANY IDENTIFICATION</b>
----------	---

### Manufacturer

KOST USA, Inc  
1000 Tennessee Ave.  
Cincinnati, OH 45229

**Contact:** Customer Service  
**Phone:** (800) 661-9391  
**Fax:** (513) 492-5555  
**Email:** sales@kostusa.com  
**Web:** www.kostusa.com

**Product Name:** DefendAL Heavy Duty Extended Life Coolant / Antifreeze  
**Revision Date:** 3/9/2012  
**Version:** 2  
**MSDS Number:** 9033  
**Common Name:** Mixture  
**CAS Number:** Mixture  
**Product Code:** 9033  
**Chemical Family:** Mixture  
**Synonyms:** Engine Coolant, Antifreeze  
**Product Use:** Engine Coolant, Antifreeze

**Emergency Telephone Number: 800-424-9300 (Chemtrec)**

<b>2</b>	<b>HAZARDS IDENTIFICATION</b>
----------	-------------------------------

**Route of Entry:** Eyes; Skin; Inhalation; Ingestion;  
**Target Organs:** Kidneys; Eyes; Central nervous system; Liver; Respiratory system; Skin;  
**Inhalation:** Vapours may be irritating to respiratory system.  
**Skin Contact:** Brief contact is essentially nonirritating. Prolonged contact may cause irritation.  
**Eye Contact:** May cause irritating. Vapour or mist may cause irritation  
**Ingestion:** Harmful if swallowed. Large amounts may be harmful or fatal if swallowed. May cause drowsiness and dizziness.

WHMIS classification:

Class D1B (Materials Causing Immediate and Serious Toxic Effects, Toxic Material)

Class D2A (Materials Causing Other Toxic Effects, Very Toxic Material)

<b>3</b>	<b>COMPOSITION/INFORMATION ON INGREDIENTS</b>
----------	---

Ingredients:

## DefendAL Heavy Duty Extended Life Coolant / Antifreeze

MSDS Number: 9033

Revision Date: 3/9/2012

Page 2 of 6

Cas #	Perc.	Chemical Name
107211	80-95%	Ethylene glycol
7732185	1-5%	Water
111466	0-5%	Diethylene glycol
19766893	1-5%	Hexanoic acid, 2-ethyl-, sodium salt
Proprietary	1-5%	Corrosion Inhibitors and Dye

### 4 FIRST AID MEASURES

- Inhalation:** If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention.
- Skin Contact:** Remove contaminated clothing and wash before reuse. Promptly flush skin with water until all chemical is removed. Wash with soap and water.
- Eye Contact:** Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation. Remove contact lenses after initial 1-2 minutes of flushing and continue flushing. Get immediate medical attention.
- Ingestion:** DO NOT DELAY. Do not induce vomiting. For spontaneous vomiting, keep head below hips. Dilute with 1 glass of water. Do NOT give liquids to a drowsy, convulsing or unconscious person. Seek immediate medical attention.

Notes to Physician: May cause significant renal, respiratory and CNS toxicity. May cause significant acidosis. Consider: Gastric lavage with protective airway, administration of ethanol or alcohol dehydrogenase inhibitors, such as fomepizole, as antidotal treatments. Call a doctor or poison control center for guidance.

### 5 FIRE FIGHTING MEASURES

- Flammability:** OSHA/NFPA Class IIIB combustible liquid
- Flash Point:** >116°C (>240°F)
- Flash Point Method:** PMCC
- Autoignition Temp:** 427°C (801°F)
- LEL:** 3.2% volume
- UEL:** Not Determined

Extinguishing Media: Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. Do not use direct water stream.

Specific Hazards: Material will not burn unless preheated. Containers exposed to intense heat from fires should be cooled with large quantities of water.

Protective Equipment: Wear full protective clothing and self-contained breathing apparatus (SCBA).

Hazardous Combustion Products: Smoke may contain the original material in addition but not limited to: Carbon Monoxide, Carbon Dioxide, Nitrogen Oxides.

### 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Isolate area. Avoid contact with spilled material. Watch out for slippery conditions when spillage. Refer to Section 8 of this Material Safety Data Sheet for personal protective equipment.

## DefendAL Heavy Duty Extended Life Coolant / Antifreeze

MSDS Number: 9033

Revision Date: 3/9/2012

Page 3 of 6

Clean Up Methods: Contain spilled material if possible. Collect in suitable and properly labeled containers. Small spills: Pick up excess with inert absorbant material and place into separate waste container. Large Spills: Dike material. Keep away from drains and ground water. Pump into suitable and properly containers or salvage truck for recovery or safe disposal. See Section 13 for disposal considerations.

Additional Advice: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

<b>7</b>	<b>HANDLING AND STORAGE</b>
----------	-----------------------------

**Handling Precautions:** Do not swallow. Avoid contact with eyes, skin, or clothing. Consider normal working hygiene. Wash thoroughly after handling. Wash clothing before reuse and decontaminate or discard contaminated shoes. Do not expose containers to open flame, excessive heat, or direct sunlight. Do not puncture or drop containers. Handle with care and avoid spillage on the floor ( slippage). Keep material out of reach of children. Use local exhaust over processing area.

**Storage Requirements:** Keep away from heat, sparks, and flames. Protect container and its fittings from physical damage. Store in cool/dry area. Suitable packing materials. Do not store near food, foodstuffs, drugs or potable water supplies.

<b>8</b>	<b>EXPOSURE CONTROLS/PERSONAL PROTECTION</b>
----------	--

**Engineering Controls:** Use mechanical (general) ventilation to control airborne levels below exposure guidelines.

**Personal Protective Equip:** HMIS PP, C | Goggles, Gloves, Apron

Eyes/Face Protection: Usage of safety glasses/ goggles is recommended.

Skin Protection: Chemical resistant gloves; Apron; Boots; Face shield or Full suit selection will depend on task. Launder contaminated clothiing before use.

Hand Protection: Use of gloves approved to relevant standards made from the following materials ma provide suitable protection: PVC, Neoprene rubber or nitrile rubber. Personal hygiene is a key element of effective habd care.

Respiratory Protection: If ventilation does not control airborne concentrations, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation.

Ingestion: Use good personal hygiene. do not consume food in the work area. wash hands before eating, drinking or smoking.

**Exposure Limits:**

Component	List	Type	Value
Ethylene Glycol	ACGIH	Ceiling Aerosol	100 mg/m <sup>3</sup>
	OSHA PEL	Ceiling	50 ppm (125 mg/m <sup>3</sup> )
Diethylene Glycol	AIHA WEEL		10 mg/m <sup>3</sup>

<b>9</b>	<b>PHYSICAL AND CHEMICAL PROPERTIES</b>
----------	---

**Appearance:** Clear; Red

**Physical State:** Liquid

**Odor:** Characteristic

## DefendAL Heavy Duty Extended Life Coolant / Antifreeze

MSDS Number: 9033

Revision Date: 3/9/2012

Page 4 of 6

**Spec Grav./Density:** 1.118 @ 20°C  
**Boiling Point:** >197°C (387°F)  
**Vapor Pressure:** <0.1 mmHg @ 20°C  
**pH:** 8.5 (50/50 DI water)

**Solubility:** Completely  
**Freezing/Melting Pt.:** -13°C (9°F)  
**Vapor Density:** >1.0

10

**STABILITY AND REACTIVITY**

**Stability:** Product is stable under normal conditions.  
**Conditions to Avoid:** High Temperature.  
**Materials to Avoid:** Strong Oxidizing Agents. Strong Acids; Strong Bases.  
**Hazardous Decomposition:** Combustion will produce carbon dioxide and, possibly toxic chemicals such as carbon monoxide. Aldehydes; Alcohols; Ethers; Ammonia  
**Hazardous Polymerization:** Will not occur.

11

**TOXICOLOGICAL INFORMATION****Acute Toxicity: Based on Ethylene Glycol**

**Oral ( LD 50):** Rat >2000 mg/kg. Human adult 3 Ounces

**Inhalation ( LC 50):** 7h, Aersol, Rat >3.95 mg/l. inhalation of vapours may cause irritation to the respiratory system

**Skin irritation:** May cause moderate skin irritation.

**Dermal Toxicity (LD 50):** Rabbit >2000 mg/kg (Low)

**Eye irritation:** Moderately irritating to eyes.

**Sensitation:** Not a skin sensitiser

**Chronic Toxicity and Carcinogenicity:** Did not cause cancer in long term animal studies

**Repeated Dose Toxicity:** Shown effects on: Kidney, Liver, Central Nervous System

**Mutagenicity:** Not known

**Reproductive and Developmental Toxicity:** Ingestion of large amounts have shown to interfere with reproduction and product birth effects in animals.

12

**ECOLOGICAL INFORMATION**

**Acute Toxicity:** No data on the product itself

**Mobility:** Dissolves in water. If product enters soil, it will be highly mobile and may contaminate ground water.

**Persistence/degradability:** No data on the product itself.

**Bioaccumulation:** Does not bioaccumulate significantly.

## DefendAL Heavy Duty Extended Life Coolant / Antifreeze

MSDS Number: 9033

Revision Date: 3/9/2012

Page 5 of 6

### 13 DISPOSAL CONSIDERATIONS

This material, if discarded as produced, is not a RCRA "listed" hazardous waste. However, it should be fully characterized for toxicity and possible reactivity prior to disposal (40 CFR 261). Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. Along with properly characterizing all waste materials, consult state and local regulations regarding the proper disposal of this material.

Container contents should be completely used and containers should be emptied prior to discard. Container rinsate could be considered a RCRA hazardous waste and must be disposed of with care and in full compliance with federal, state and local regulations. Larger empty containers, such as drums, should be returned to the distributor or to a drum reconditioner. To assure proper disposal of smaller empty containers, consult with state and local regulations and disposal authorities.

### 14 TRANSPORT INFORMATION

#### US DOT Classification (49CFR)

Identification Number	NA 3082
Proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s.
Technical Name:	( contains Ethylene Glycol)
Class/Division:	9
Packing Group:	III
Reportable Quantity:	5,000 lbs
ERG page number:	171

#### Canadian Road and Rail Shipping Classification

NOT REGULATED

#### IMDG

NOT REGULATED

#### IATA/CAO

NOT REGULATED

### 15 REGULATORY INFORMATION

#### OSHA Hazard Communication Standard:

This product is a "Hazardous Chemical" as defined by the OSHA 29CFR 1910.1200

#### SARA Hazardous Categories Section 311/312 (EPCRA):

Immediate (Acute): yes  
Delayed (Chronic): yes  
Fire: no  
Reactive: no  
Sudden Release: no

#### SARA Toxic Release Inventory Section 313 (TRI):

Component	Cas	Percentage
Ethylene Glycol	107-21-1	~92%

#### CERCLA

Component	Cas	Reportable Quantity
-----------	-----	---------------------



## DefendAL Heavy Duty Extended Life Coolant / Antifreeze

MSDS Number: 9033

Revision Date: 3/9/2012

Page 6 of 6

Ethylene Glycol 107-21-1 5,000 lbs

### California Safe Water Drinking and Toxic Enforcement Act (Proposition 65)

This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

### Component Notification Status

DSL (CA) Listed  
TSCA (US) Listed

### COMPONENT / (CAS/PERC) / CODES

\*Ethylene glycol (107211 80-95%) CERCLA, HAP, MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR

\*Water (7732185 1-5%) TSCA

\*Diethylene glycol (111466 0-5%) HAP, PA, TSCA

\*Hexanoic acid, 2-ethyl-, sodium salt (19766893 1-5%) TSCA

### REGULATORY KEY DESCRIPTIONS

CERCLA = Superfund clean up substance  
HAP = Hazardous Air Pollutants  
MASS = MA Massachusetts Hazardous Substances List  
NJHS = NJ Right-to-Know Hazardous Substances  
OSHA = OSHA workplace Air Contaminants  
PA = PA Right-To-Know List of Hazardous Substances  
SARA313 = SARA 313 Title III Toxic Chemicals  
TSCA = Toxic Substances Control Act  
TXAIR = TX Air Contaminants with Health Effects Screening Level

16	<b>OTHER INFORMATION</b>
----	--------------------------

### 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).