



DefendAL Enviro HD Precharged Concentrate, 50/50

Safety Data Sheet

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

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Version: 2.1

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : DefendAL Enviro HD Precharged Concentrate, 50/50

1.2. Recommended use and restrictions on use

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

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-US classification

Skin Sens. 1 H317 May cause an allergic skin reaction.
Repr. 1B H360 May damage fertility or the unborn child.

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

2.2. GHS Label elements, including precautionary statements

GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Danger
Hazard statements (GHS-US) : H317 - May cause an allergic skin reaction.
H360 - May damage fertility or the unborn child.
Precautionary statements (GHS-US) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 - Contaminated work clothing must not be allowed out of the workplace
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 - If on skin: Wash with plenty of water/...
P308+P313 - If exposed or concerned: Get medical advice/attention.
P321 - Specific treatment (see supplemental first aid instruction on this label)
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P363 - Wash contaminated clothing before reuse.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

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

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3.2. Mixtures

Name	Product identifier	%	GHS-US classification
disodium tetraborate, anhydrous	(CAS-No.) 1330-43-4	0.01 - 0.3	Repr. 1B, H360 STOT RE 2, H373
sodium mercaptobenzothiazole	(CAS-No.) 2492-26-4	0.01 - 0.3	Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

*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 exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash skin thoroughly with mild soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

- Symptoms/effects : May damage fertility or the unborn child.
- Symptoms/effects after skin contact : May cause an allergic skin reaction.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : None known.

5.2. Specific hazards arising from the chemical

- Fire hazard : No particular fire or explosion hazard.
- Reactivity : No dangerous reactions known.

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

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. Use personal protective equipment as required.

6.1.1. For non-emergency personnel

- Protective equipment : Refer to section 8.2.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Refer to section 8.2.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

- For containment : Contain and/or absorb spill with inert material, then place in suitable container.

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

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Avoid all eye and skin contact and do not breathe vapour and mist. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool well ventilated place.

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

Incompatible materials : Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

disodium tetraborate, anhydrous (1330-43-4)		
ACGIH	Local name	Borate compounds, inorganic
ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³
ACGIH	ACGIH STEL (mg/m ³)	6 mg/m ³
ACGIH	Remark (ACGIH)	Varies URT irr
OSHA	OSHA PEL (TWA) (mg/m ³)	10 mg/m ³ 8 hours
NIOSH	NIOSH REL (TWA) (mg/m ³)	1 mg/m ³ 10 hours

sodium mercaptobenzothiazole (2492-26-4)		
Not applicable		

8.2. Appropriate engineering controls

Appropriate engineering controls : Avoid creating mist or spray. Avoid splashing. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Either local exhaust or general room ventilation is usually required.

Environmental exposure controls : Prevent leakage or spillage.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear suitable protective clothing and gloves. nitrile rubber gloves

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

In case of inadequate ventilation wear respiratory protection. If needed, use an air-purifying respirator with organic vapor cartridges and a dust/mist prefilter.

Other information:

Do not eat, drink or smoke during use.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Free & clear.
Colour	: Green Fuchsia
Odour	: odourless
Odour threshold	: No data available
pH	: 10.2 - 10.8
Melting point	: No data available
Freezing point	: -50 °C
Boiling point	: 180 °C
Flash point	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: < 1 mm Hg @ 20 °C
Relative vapour density at 20 °C	: > 1
Relative density	: 1.045 @ 20 °C
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 under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong oxidizers. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

disodium tetraborate, anhydrous (1330-43-4)	
LD50 oral rat	3450 mg/kg male
LD50 dermal rabbit	> 2000 mg/kg

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disodium tetraborate, anhydrous (1330-43-4)	
LC50 inhalation rat (mg/l)	> 2.03 mg/l 5h
ATE US (oral)	3450 mg/kg bodyweight

sodium mercaptobenzothiazole (2492-26-4)	
LD50 oral rat	2100 mg/kg male
LD50 dermal rabbit	> 7940 mg/kg New Zealand White Rabbit
ATE US (oral)	2100 mg/kg bodyweight

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: May damage fertility or the unborn child.
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

disodium tetraborate, anhydrous (1330-43-4)	
LOAEL (oral, rat, 90 days)	58.5 mg/kg bodyweight/day
NOAEL (oral, rat, 90 days)	17.5 mg/kg bodyweight/day
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	: Inhalation. Skin and eye contact.
Symptoms/effects	: May damage fertility or the unborn child.
Symptoms/effects after skin contact	: May cause an allergic skin reaction.

SECTION 12: Ecological information

12.1. Toxicity

disodium tetraborate, anhydrous (1330-43-4)	
LC50 fish 1	74 mg/l 96h Limanda limanda

sodium mercaptobenzothiazole (2492-26-4)	
LC50 fish 1	1.87 mg/l 96h

12.2. Persistence and degradability

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Persistence and degradability	Not established.

12.3. Bioaccumulative potential

DefendAL Enviro HD Precharged Concentrate	
Bioaccumulative potential	Not established.

sodium mercaptobenzothiazole (2492-26-4)	
Log Pow	2.42

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

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

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Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated.

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

15.2. International regulations

CANADA

disodium tetraborate, anhydrous (1330-43-4)

Listed on the Canadian DSL (Domestic Substances List) inventory.

sodium mercaptobenzothiazole (2492-26-4)

Listed on the Canadian DSL (Domestic Substances List) inventory.

EU-Regulations

disodium tetraborate, anhydrous (1330-43-4)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

sodium mercaptobenzothiazole (2492-26-4)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

disodium tetraborate, anhydrous (1330-43-4)

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

sodium mercaptobenzothiazole (2492-26-4)

Listed on Taiwan National Chemical Inventory
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
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Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the AICS (Australian Inventory of Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

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

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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 monopropylene 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 the manufacture of munitions.
- The use in aircraft deicers.
- KOST USA propylene containing products can not be upgraded to or substituted for USP monopropylene glycol, nor used in any pharmaceutical or other application such as cosmetics and personal or animal health care.
- 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).

For more information contact your KOST® USA, Inc. representative.

Revision date : 07/12/2018

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/>. 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:

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Repr. 1B	Reproductive toxicity, Category 1B
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H360	May damage fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Abbreviations and acronyms:

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	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

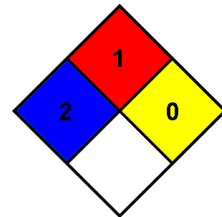
: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

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.



Indication of changes:
Regulatory information.

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