

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

Date of issue: 08/08/2014 Revision date: 11/18/2015 Version: 2.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Product name : Duralene Automotive 50/50 (GREEN)

Product Code : AFGUAP1

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

Use of the substance/mixture : Antifreeze. Coolant.

1.3. Details of the supplier of the safety data sheet

The United Oil Company, Inc. 4405 E. Baltimore St, Baltimore, MD 21224 Phone 800.296.1203 customerorders@duralene.com www.duralene.com

1.4. Emergency telephone number : 1-800-424-9300

Emergency number CHEMTREC (24 HOURS)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute Tox. 4 (Oral) H302 Skin Sens. 1 H317 Repr. 1B H360 STOT RE 2 H373

Full text of H-statements: see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US)





GHS07 GH

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H302 - Harmful if swallowed

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

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, spray P264 - Wash hands thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P272 - Contaminated work clothing must not be allowed out of the workplace

P280 - Wear eye protection, protective gloves

P301+P312 - If swallowed: Call a doctor if you feel unwell P302+P352 - If on skin: Wash with plenty of water

P308+P313 - If exposed or concerned: Get medical advice/attention

P314 - Get medical advice/attention if you feel unwell

P321 - Specific treatment (see First aid measures on this label)

P330 - Rinse mouth

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention P362+P364 - Take off contaminated clothing and wash it before reuse

P405 - Store locked up

P501 - Dispose of contents/container to an authorised waste collection point

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2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

0 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)

0 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)

0.21 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Ethylene glycol	(CAS No) 107-21-1	80 – 99	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Diethylene glycol	(CAS No) 111-46-6	0 – 10	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
sodium nitrite	(CAS No) 7632-00-0	0.1 – 1	Ox. Sol. 3, H272 Acute Tox. 3 (Oral), H301 Aquatic Acute 1, H400
disodium tetraborate, anhydrous	(CAS No) 1330-43-4	0.01 – 0.5	Repr. 1B, H360
sodium mercaptobenzothiazole	(CAS No) 2492-26-4	0.01 – 0.5	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 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 soap and water. If skin irritation or rash occurs: Get medical

advice/attention. Wash contaminated clothing before reuse.

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.

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

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

Symptoms/injuries : May damage fertility or the unborn child. Causes damage to organs through prolonged or

repeated exposure.

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

Symptoms/injuries after skin contact : May cause an allergic skin reaction.

Symptoms/injuries after eye contact : Direct contact with the eyes is likely to be irritating.

Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

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

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : No specific fire or explosion hazard.

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.

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Protection during firefighting

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

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. Clothing impervious to chemical penetration. Wear

suitable gloves resistant to chemical penetration.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Chemical goggles or safety glasses. Wear suitable protective clothing and gloves. 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/vapours/spray. Do not handle until all safety precautions have been read

and understood. Obtain special instructions before use.

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. 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. Keep container closed when

not in use

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

Incompatible materials : Sources of ignition.

Prohibitions on mixed storage : Keep away from incompatible materials.

7.3. Specific end use(s)

Antifreeze. Coolant.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DefendAL Heavy Duty Pre-Charged Coolant/Antifreeze Concentrate			
ACGIH	Not applicable		
OSHA	Not applicable		
Ethylene glycol (107-21-1)			
ACGIH	ACGIH Ceiling (ppm)	39.4 ppm	
ACGIH	Remark (ACGIH)	URT & eye irr	
OSHA	Not applicable		

Diethylene glycol (111-46-6)	
ACGIH	Not applicable
OSHA	Not applicable

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sodium nitrite (7632-00-0)		
ACGIH	ACGIH TWA (mg/m³)	10 mg/m³ as dust
OSHA	Not applicable	

disodium tetraborate, anhydrous (1330-43-4)		
ACGIH	ACGIH TWA (mg/m³)	2 mg/m³
ACGIH	ACGIH STEL (mg/m³)	6 mg/m³
ACGIH	Remark (ACGIH)	Varies URT irr
OSHA	OSHA PEL (TWA) (mg/m³)	10 mg/m ³ 8 hours

sodium mercaptobenzothiazole (2492-26-4)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

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

is usually required.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear suitable gloves resistant to chemical penetration. nitrile rubber gloves.

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

Skin and body protection : Wear suitable protective clothing. Impervious clothing.

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is

recommended. 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
Appearance : Free & clear.

Colour : Blue Green Fuchsia Clear to pale yellow.

Odour : No data available
Odour threshold : No data available

pH : 10.2 - 10.8 50/50 in water

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : No data available

Freezing point : -36.9 - -36.4 °C

Boiling point : No data available

Flash point : 116 °C

Auto-ignition temperature : No data available
Decomposition temperature : 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 : 1.01 - 1.131 Specific gravity at 20 °C

Solubility : No data available Log Pow : No data available Log Kow No data available Viscosity, kinematic : No data available : No data available Viscosity, dynamic Explosive properties : No data available Oxidising properties : No data available **Explosive limits** No data available

9.2. Other information

No additional information available

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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.

Possibility of hazardous reactions 10.3.

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 oxidizing agents. Strong bases. Strong acids.

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Oral: Harmful if swallowed.
DefendAL Heavy Duty Pre-Charged Coolant/	Antifreeze Concentrate
ATE US (oral)	500.000 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 US (oral)	500.000 mg/kg bodyweight
Diethylene glycol (111-46-6)	
LD50 dermal rat	13300 mg/kg
LC50 inhalation rat (mg/l)	> 4.6 mg/l/4h
ATE US (oral)	500.000 mg/kg bodyweight
ATE US (dermal)	13300.000 mg/kg bodyweight
sodium nitrite (7632-00-0)	
LD50 oral rat	180 mg/kg
ATE US (oral)	180.000 mg/kg bodyweight
disodium tetraborate, anhydrous (1330-43-4)	
LD50 oral rat	3450 mg/kg male
LD50 dermal rabbit	> 2000 mg/kg no deaths occurred
LC50 inhalation rat (mg/l)	> 2.03 mg/l 5h - no deaths occurred
ATE US (oral)	3450.000 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)	2100.000 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
Ethylene glycol (107-21-1)	
IARC group	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.

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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	
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	
Aspiration hazard	: Not classified	
Symptoms/injuries after inhalation	: Inhalation may cause: irritation, coughing, shortness of breath.	
Symptoms/injuries after skin contact	: May cause an allergic skin reaction.	
Symptoms/injuries after eye contact	: Direct contact with the eyes is likely to be irritating.	
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.	
Likely routes of exposure	: Inhalation;Skin and eye contact	

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.	
Diethylene glycol (111-46-6)		
LC50 fish 1	75200 mg/l	
EC50 Daphnia 1	> 10000 mg/l	
sodium nitrite (7632-00-0)	sodium nitrite (7632-00-0)	
LC50 fish 1	0.11 mg/l	
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

DefendAL Heavy Duty Pre-Charged Coolant/Antifreeze Concentrate	
Persistence and degradability	Not readily biodegradable.
Ethylene glycol (107-21-1)	
Persistence and degradability	Readily biodegradable.
Diethylene glycol (111-46-6)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

Ethylene glycol (107-21-1)	
Log Pow	- 1.36
Bioaccumulative potential	Not expected to bioaccumulate.
Diethylene glycol (111-46-6)	
Bioconcentration factor (BCF REACH)	100
Log Pow	-1.98
Bioaccumulative potential	Not expected to bioaccumulate.

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

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Waste treatment 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

In accordance with DOT

Non-bulk:

Not a dangerous good

Bulk:

RQ >= 5178 lbs

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

Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials)



DOT Symbols : G - Identifies PSN requiring a technical name

Packing group (DOT) : III - Minor Danger

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Ethylene glycol (107-21-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
SARA Section 313 - Emission Reporting	>95%

Diethylene glycol (111-46-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

sodium nitrite (7632-00-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Disodium tetraborate, anhydrous (1330-43-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

sodium mercaptobenzothiazole (2492-26-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Ethylene glycol (107-21-1)

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

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Diethylene glycol (111-46-6)

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

sodium nitrite (7632-00-0)

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

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

Ethylene glycol (107-21-1)

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

Diethylene glycol (111-46-6)

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

sodium nitrite (7632-00-0)

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

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)

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 4 (Oral) H302

STOT RE 2 H373

Full text of classification categories and H statements : see section 16

15.2.2. 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 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)

Diethylene glycol (111-46-6)

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 nitrite (7632-00-0)

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)

Listed on the Chinese Catalog of Hazardous Chemicals.

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)

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sodium mercaptobenzothiazole (2492-26-4)

Listed on Taiwan National Chemical Inventory

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on KECI (Korean Existing Chemicals Inventory)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on the AICS (Australian Inventory of Chemical Substances)

15.3. US State regulations

Ethylene glycol (107-21-1)

- U.S. Minnesota Hazardous Substance List
- U.S. Pennsylvania List of Hazardous Substances
- U.S. New Jersey Right to Know Hazardous Substance List

sodium nitrite (7632-00-0)

- U.S. Pennsylvania List of Hazardous Substances
- U.S. New York Right to Know List of Hazardous Chemicals
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Massachusetts 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.

Indication of changes : Transport information.

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Data sources

 ESIS (European chemincal Substances Information System; accessed at: http://esis.irc.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.

: ACGIH (American Conference of Governmeent 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 Weight Average.

Other information

None.

Full text of H-statements:

Abbreviations and acronyms

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Ox. Sol. 3	Oxidising Solids, Category 3
Repr. 1B	Reproductive toxicity, Category 1B
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Sens. 1	Sensitisation — Skin, category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H272	May intensify fire; oxidiser
H301	Toxic if swallowed
H302	Harmful if swallowed
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

NFPA health hazard

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

NFPA fire hazard

: 1 - Must be preheated before ignition can occur.

NFPA reactivity

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

1 0

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