

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

1.1. Product identifier

Product form : Mixture
Product name : Duralene Dura-Cool Nitrite Free ELC 50/50
Product Code : AFNFP5

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

Emergency number : 1-800-424-9300
CHEMTREC (24 HOURS)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute Tox. 4 (Oral) H302
Skin Irrit. 2 H315
Eye Irrit. 2A H319
STOT RE 2 H373

Full text of H-statements: see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07

GHS08

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : H302 - Harmful if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US) : P260 - Do not breathe mist, spray, vapours
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
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
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P314 - Get medical advice/attention if you feel unwell
P321 - Specific treatment (see First aid measures on this label)
P330 - Rinse mouth
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
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)

Not applicable

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 | 40 – 95 | Acute Tox. 4 (Oral), H302 STOT RE 2, H373 |
| Potassium hydroxide | (CAS No) 1310-58-3 | 1 – 2.5 | Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314 |

*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. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
- 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. If eye irritation persists: Get medical advice/attention.
- 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 cause 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 : Causes skin irritation.
- Symptoms/injuries after eye contact : Causes serious eye irritation.
- 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 : None known.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : No specific fire or explosion hazard.
- 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. Wear fire/flame resistant/retardant clothing. Wear a 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 : Wear suitable gloves resistant to chemical penetration. Chemical goggles or safety glasses.

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Emergency procedures : Ventilate area.

6.1.2. For emergency responders

Protective equipment : Wear suitable gloves. Chemical goggles or safety glasses. 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/vapour/spray. Do not eat, drink or smoke when using this product.

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 : Keep container closed when not in use. Keep only in the original container in a cool well ventilated place.

Incompatible products : Strong oxidizing agents. Strong acids. Strong bases.

Incompatible materials : Heat sources. Direct sunlight.

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 Nitrite-Free Extended Life Coolant/Antifreeze Concentrate and 50/50 | | |
|---|------------------------------------|---------------------|
| ACGIH | Not applicable | |
| OSHA | Not applicable | |
| Potassium hydroxide (1310-58-3) | | |
| ACGIH | ACGIH Ceiling (mg/m ³) | 2 mg/m ³ |
| OSHA | Not applicable | |
| Ethylene glycol (107-21-1) | | |
| ACGIH | ACGIH Ceiling (ppm) | 39.4 ppm |
| ACGIH | Remark (ACGIH) | URT & eye irr |
| 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 : Chemical goggles or safety glasses.

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

Other information : Do not eat, drink or smoke when using this product.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Physical state | : Liquid |
| Colour | : Yellow Blue red |
| Odour | : No data available |
| Odour threshold | : No data available |
| pH | : 8.4 - 8.6 |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Melting point | : No data available |
| Freezing point | : -36 °C |
| Boiling point | : 108 °C |
| 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 | : Specific Gravity @ 15.5 °C - 1.08-1.131 |
| Solubility | : No data available |
| Log Pow | : No data available |
| Log Kow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : 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 at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions

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 acids. Strong bases. Strong oxidizers.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

| DefendAL Heavy Duty Nitrite-Free Extended Life Coolant/Antifreeze Concentrate and 50/50 | |
|---|--------------------------|
| ATE US (oral) | 518.052 mg/kg bodyweight |
| Potassium hydroxide (1310-58-3) | |
| LD50 oral rat | 333 mg/kg bodyweight |
| ATE US (oral) | 333.000 mg/kg bodyweight |

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| 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 |

| | |
|-----------------------------------|----------------------------------|
| Skin corrosion/irritation | : Causes skin irritation. |
| Serious eye damage/irritation | : Causes serious eye irritation. |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |

| Ethylene glycol (107-21-1) | |
|----------------------------|-------------------------------------|
| IARC group | Not listed in carcinogenicity class |

| | |
|--|--|
| Reproductive toxicity | : Not classified |
| 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/injuries after inhalation | : Inhalation may cause: irritation, coughing, shortness of breath. |
| Symptoms/injuries after skin contact | : Causes skin irritation. |
| Symptoms/injuries after eye contact | : Causes serious eye irritation. |
| Symptoms/injuries after ingestion | : Swallowing a small quantity of this material will result in serious health hazard. |
| Likely routes of exposure | : Skin and eye contact;Inhalation |

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No ecotoxicological data about this product are known.

| 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. |

12.2. Persistence and degradability

| DefendAL Heavy Duty Nitrite-Free Extended Life Coolant/Antifreeze Concentrate and 50/50 | |
|---|------------------|
| Persistence and degradability | Not established. |

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

12.3. Bioaccumulative potential

| DefendAL Heavy Duty Nitrite-Free Extended Life Coolant/Antifreeze Concentrate and 50/50 | |
|---|------------------|
| Bioaccumulative potential | Not established. |

| Ethylene glycol (107-21-1) | |
|----------------------------|--------------------------------|
| Log Pow | - 1.36 |
| Bioaccumulative potential | Not expected to bioaccumulate. |

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:

Concentrate RQ \geq 5,382 lbs

50/50 RQ \geq 10,103 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

| Potassium hydroxide (1310-58-3) | |
|---|--|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |
| 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% |

15.2. International regulations

CANADA

| Potassium hydroxide (1310-58-3) | |
|--|--|
| Listed on the Canadian DSL (Domestic Substances List) inventory. | |
| Ethylene glycol (107-21-1) | |
| Listed on the Canadian DSL (Domestic Substances List) inventory. | |

EU-Regulations

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Potassium hydroxide (1310-58-3)

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

Ethylene glycol (107-21-1)

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

Skin Irrit. 2 H315

Eye Irrit. 2 H319

STOT RE 2 H373

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

15.2.2. National regulations

Potassium hydroxide (1310-58-3)

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 Chinese Catalog of Hazardous Chemicals.

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

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)

15.3. US State regulations

Potassium hydroxide (1310-58-3)

U.S. - Minnesota - Hazardous Substance List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - New York - Right to Know List of Hazardous Chemicals

U.S. - Pennsylvania - List of Hazardous Substances

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

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.

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- 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 medical / 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 United Oil Company, Inc. representative.

| | |
|----------------------------|---|
| Indication of changes | : Transport information. |
| Revision date | : 07/15/2015 |
| 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 . |
| 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 Weight Average. |
| Other information | : None. |

Full text of H-statements:

| | |
|-------------------------------------|---|
| Acute Tox. 4 (Dermal) | Acute toxicity (dermal), Category 4 |
| Acute Tox. 4 (Inhalation:dust,mist) | Acute toxicity (inhalation:dust,mist) Category 4 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Eye Irrit. 2A | Serious eye damage/eye irritation, Category 2A |
| Skin Corr. 1A | Skin corrosion/irritation, Category 1A |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| STOT RE 2 | Specific target organ toxicity — Repeated exposure, Category 2 |
| H302 | Harmful if swallowed |
| H312 | Harmful in contact with skin |
| H314 | Causes severe skin burns and eye damage |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |
| H332 | Harmful if inhaled |
| H373 | May cause damage to organs through prolonged or repeated exposure |

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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.

