Universal Global Heavy Duty Extended Life Antifreeze 50/50

Safety Data Sheet

Date issue: 05-14-15 Version A Universal oil SDS No: 16 42 16 A

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

1.1. Product identifier

Product form : Mixture

Product name. : Universal Global Heavy Duty Extended Life Antifreeze 50/50

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

Use of the substance/mixture : Antifreeze.

1.3. Details of the supplier of the safety data sheet

Universal Oil
265 Jefferson Ave
Cleveland, OH 44113
T 1-216-771-4300- F 1-216-771-1845
sales@universaloil.com - www.universaloil.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
STOT RE 2 H373

Full text of H-phrases: 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
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US) : P260 - Do not breathe mist/vapours/spray
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P301 + P312 - If swallowed: Call a poison center/doctor if you feel unwell
P314 - Get medical advice/attention if you feel unwell
P330 - Rinse mouth
P501 - Dispose of contents/container in accordance with local and national regulaitons

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

1.44 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal).
1.66 percent of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist)).

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixture

Components with health hazards above the applicable thresholds are shown. Exact concentrations withheld as trade secret.

Name	Product identifier	%	GHS-US classification
Ethylene glycol	(CAS No) 107-21-1	40 – 60	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
sodium benzoate	(CAS No) 532-32-1	0.1 – 2	Eye Irrit. 2A, H319
Potassium hydroxide	(CAS No) 1310-58-3	< 0.5	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314
sodium nitrite	(CAS No) 7632-00-0	< 0.5	Ox. Sol. 3, H272 Acute Tox. 3 (Oral), H301 Aquatic Acute 1, H400
Disodium metasilicate	(CAS No) 6834-92-0	< 0.5	Skin Corr. 1B, H314 STOT SE 3, H335

Full text of H-phrases: 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 : Take off immediately all contaminated clothing and wash it before reuse. Wash with plenty of soap and water.

First-aid measures after eye contact : 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/doctor/physician if you feel unwell.

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

Symptoms/injuries : Causes damage to organs through prolonged or repeated exposure.

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

Emergency procedures : Ventilate area.

6.1.2. For emergency responders

Protective equipment : Wear suitable 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, spray, vapours.

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.

7.3. Specific end use(s)

Antifreeze. Coolant.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ethylene glycol (107-21-1)		
ACGIH	ACGIH Ceiling (mg/m³)	100 mg/m³
ACGIH	ACGIH Ceiling (ppm)	39.4 ppm
ACGIH	Remark (ACGIH)	URT & eye irr
OSHA	Not applicable	
sodium benzoate (532-32-1)		
ACGIH	Not applicable	
OSHA	Not applicable	
Potassium hydroxide (1310-58-3)		
ACGIH	ACGIH Ceiling (mg/m³)	2 mg/m³
OSHA	Not applicable	
sodium nitrite (7632-00-0)		
ACGIH	ACGIH TWA (mg/m³)	10 mg/m³ as dust
OSHA	Not applicable	
Disodium metasilicate (6834-92-0)		
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 : It is a good industrial hygiene practice to minimize skin contact. In case of repeated or prolonged contact wear gloves.

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

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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour	:	Yellow, blue
Odour	:	Odourless
Odour threshold	:	No data available
pH	:	8 – 8.8
Relative evaporation rate (butylacetate=1)	:	No data available
Melting/freezing point	:	-38 °C
Boiling point	:	> 107 °C
Flash point	:	No data available
Self ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	< 0.1 mm Hg @ 20 °C
Relative vapour density at 20 °C	:	> 1
Relative density	:	1.077 @ 20 °C
Solubility	:	Soluble in water. Water: Solubility in water of component(s) of the mixture : • Ethylene glycol: 1000 g/l • sodium benzoate: 555 g/l
Log Pow	:	No data available
Viscosity	:	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.

Universal Global Heavy Duty Extended Life Antifreeze 50/50	
ATE US (oral)	1010.737 mg/kg bodyweight
Ethylene glycol (107-21-1)	
LD50 oral rat	7712 mg/kg
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
sodium benzoate (532-32-1)	
LD50 oral rat	3140 mg/kg bodyweight
ATE US (oral)	3140.000 mg/kg bodyweight
Potassium hydroxide (1310-58-3)	
LD50 oral rat	333 mg/kg
ATE US (oral)	333.000 mg/kg bodyweight

sodium nitrite (7632-00-0)	
LD50 oral rat	180 mg/kg
ATE US (oral)	180.000 mg/kg bodyweight
Disodium metasilicate (6834-92-0)	
LD50 oral rat	1250 ml/kg

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
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)	
NOAEL (oral,rat,90 days)	150 mg/kg bodyweight/day kidney

Aspiration hazard : Not classified
Symptoms/injuries after eye contact : Direct contact with the eyes is likely irritating.
Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.
Likely routes of exposure : Skin and eyes contact, inhalation

SECTION 12: Ecological information

12.1. Toxicity

Ethylene glycol (107-21-1)	
LC50 fishes 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.
sodium benzoate (532-32-1)	
LC50 fishes 1	484 mg/l 96 h
EC50 Daphnia 1	> 100 mg/l 96 h
sodium nitrite (7632-00-0)	
LC50 fishes 1	0.11 mg/l
Disodium metasilicate (6834-92-0)	
LC50 fishes 1	2320 mg/l Gambusia affinis
EC50 Daphnia 1	1700 mg/l
LC50 fish 2	210 mg/l Brachydanio rerio

12.2. Persistence and degradabilit

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

12.3. Bioaccumulative potential

Ethylene glycol (107-21-1)	
Log Pow	- 1.36
Bioaccumulative potential	Not expected to bioaccumulate.
Disodium metasilicate (6834-92-0)	
Bioaccumulative potential	Not expected to bioaccumulate.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer : No known ozone damage caused by this product.
Effect on the global warming : No known ecological damage caused by this product.

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

Not considered a dangerous good for transport regulations

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%
sodium benzoate (532-32-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Potassium hydroxide (1310-58-3)	
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 metasilicate (6834-92-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Not listed on SARA Section 313 (Specific toxic chemical listings)

15.2. International regulations

CANADA

Universal Global Heavy Duty Extended Life Antifreeze 50/50	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects
Ethylene glycol (107-21-1)	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
sodium benzoate (532-32-1)	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
Potassium hydroxide (1310-58-3)	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
sodium nitrite (7632-00-0)	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
Disodium metasilicate (6834-92-0)	
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) substances.
sodium benzoate (532-32-1)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.

Potassium hydroxide (1310-58-3)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.
sodium nitrite (7632-00-0)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.
Disodium metasilicate (6834-92-0)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Acute Tox. 4 (Oral) H302
STOT RE 2 H373
Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

Xn; R22

15.2.2. National regulations

Ethylene glycol (107-21-1)
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory. Listed on the AICS (the Australian Inventory of Chemical Substances). Listed on Taiwan National Chemical Inventory Listed on New Zealand - Inventory of Chemicals (NZIoC) Listed on KECI (Chemical Inventory of Korea) Listed on Inventory of Existing Chemical Substances (IECSC) Listed on Inventory of Chemicals and Chemical Substances (PICCS)
sodium benzoate (532-32-1)
Listed on Inventory of Chemicals and Chemical Substances (PICCS) Listed on Inventory of Existing Chemical Substances (IECSC) Listed on KECI (Chemical Inventory of Korea) Listed on New Zealand - Inventory of Chemicals (NZIoC) Listed on Taiwan National Chemical Inventory Listed on the AICS (the Australian Inventory of Chemical Substances). Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
Potassium hydroxide (1310-58-3)
Listed on Inventory of Chemicals and Chemical Substances (PICCS) Listed on Inventory of Existing Chemical Substances (IECSC) Listed on KECI (Chemical Inventory of Korea) Listed on New Zealand - Inventory of Chemicals (NZIoC) Listed on Taiwan National Chemical Inventory Listed on the AICS (the Australian Inventory of Chemical Substances). Listed on the Chinese Catalog of Hazardous Chemicals. Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
sodium nitrite (7632-00-0)
Listed on Inventory of Existing Chemical Substances (IECSC) Listed on Taiwan National Chemical Inventory Listed on KECI (Chemical Inventory of Korea) Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory. Listed on Inventory of Chemicals and Chemical Substances (PICCS) Listed on New Zealand - Inventory of Chemicals (NZIoC) Listed on the AICS (the Australian Inventory of Chemical Substances). Listed on the Chinese Catalog of Hazardous Chemicals.
Disodium metasilicate (6834-92-0)
Listed on New Zealand - Inventory of Chemicals (NZIoC) Listed on KECI (Chemical Inventory of Korea) Water hazard class (WGK) Listed on Taiwan National Chemical Inventory Listed on Inventory of Existing Chemical Substances (IECSC) Listed on the Chinese Catalog of Hazardous Chemicals. Listed on the AICS (the Australian Inventory of Chemical Substances). Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory. Listed on Inventory of Chemicals and Chemical Substances (PICCS)

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
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
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 Universal Oil 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 Universal Oil has decided not to, including minimizing unnecessary risk and liabilities to the company. Universal Oil does not knowingly market these products into these non-supported applications. This list is not all-inclusive, and Universal Oil. 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 Universal Oil representative.

Indication of changes	:	Original Document.
Data sources	:	ESIS (European chemincal 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 Governement 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.

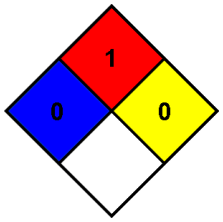
Full text of H-phrases::

Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Ox. Sol. 3	Oxidising solids Category 3
Skin Corr. 1A	skin corrosion/irritation Category 1A
Skin Corr. 1B	skin corrosion/irritation Category 1B
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H272	May intensify fire; oxidizer
H301	Toxic if swallowed
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H412	Harmful to aquatic life with long lasting effects

NFPA health hazard : 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.

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.



SDS US (GHS HazCom 2012)

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