



Final Charge Global Concentrate Antifreeze & Coolant

Safety Data Sheet

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

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

1.1. Product identifier

Product form : Mixture
Product name : Final Charge Global Concentrate Antifreeze & Coolant

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

Use of the substance/mixture : Heavy Duty Engine Coolant

1.3. Details of the supplier of the safety data sheet

Old World Industries, LLC
4065 Commercial Ave.
Northbrook, IL 60062 - USA
T (847) 559-2000
www.oldworldind.com

1.4. Emergency telephone number

Emergency number : (800) 424-9300; (703) 527 3887 (International)
Chemtrec

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute Tox. 4 (Oral) H302
Repr. 2 H361
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
H361 - Suspected of damaging fertility or the unborn child
H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (oral)

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, spray, vapors
P264 - Wash affected areas thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear personal protective equipment as required
P301+P310 - If swallowed: Immediately call doctor/physician or poison center
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P308+P313 - If exposed or concerned: Get medical advice/attention
P405 - Store locked up
P501 - Dispose of contents/container, in a safe manner, to appropriate waste disposal facility, in accordance with local/regional/national/international regulations

2.3. Other hazards

Other hazards not contributing to the classification : Prolonged exposure may cause eye and skin irritation.

2.4. Unknown acute toxicity (GHS US)

No data available

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SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	% by wt	GHS-US classification
ethylene glycol	(CAS No) 107-21-1	90 - 97	Acute Tox. 4 (Oral), H302
diethylene glycol	(CAS No) 111-46-6	< 5	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
sodium benzoate	(CAS No) 532-32-1	< 4	Acute Tox. 4 (Dermal), H312
water	(CAS No) 7732-18-5	< 4	Not classified
potassium p-tert-butylbenzoate	(CAS No) 16518-26-6	< 3	Repr. 2, H361
denatonium benzoate	(CAS No) 3734-33-6	30 - 50 ppm	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : If you feel unwell, seek medical advice (show the label where possible). Call a poison center or a doctor if you feel unwell.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Seek immediate medical advice. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
- First-aid measures after skin contact : Remove contaminated clothing. Wash skin with plenty of water.
- First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse immediately with plenty of water for 15 minutes, lifting lower and upper lids. Rinse eyes with water as a precaution.
- First-aid measures after ingestion : If the person is fully conscious, make him/her drink two glasses of water. Never give an unconscious person anything to drink. If medical advice is delayed, and if the person has swallowed a moderate volume of material (a few ounces), then give three to four ounces of hard liquor, such as whiskey. For children, give proportionally less liquor, according to weight. Rinse mouth. Call a poison center or a doctor if you feel unwell.

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

- Symptoms/injuries : Suspected of damaging fertility or the unborn child.
- Symptoms/injuries after ingestion : The lethal dose in humans is estimated to be 100 mL (3 oz).

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

A more effective intravenous antidote for physician uses is 4-methylpyrazole, a potent inhibitor of alcohol dehydrogenases, which effectively blocks the formation of toxic metabolites of ethylene glycol. It has been used to decrease the metabolic consequences of ethylene glycol poisoning before metabolic acidosis coma, seizures, and renal failure have occurred.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Water fog. Fine water spray. Water spray. Dry powder. Foam. Carbon dioxide.
- Unsuitable extinguishing media : May spread fire.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.
- Reactivity : No dangerous reactions known under normal conditions of use.

5.3. Advice for firefighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
- Special protective equipment for fire fighters : Wear positive pressure self-contained breathing apparatus (SCBA). Protective fire fighting clothing (includes fire-fighting helmet, coat, pants, boots and gloves).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area.

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6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Refer to section 8.2. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Provide good ventilation in process area to prevent formation of vapor.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Product may become solid at temperatures below -18 °C (0 °F). Do not store near food, foodstuffs, drugs or potable water supplies. Do not cut, drill, weld, use a blowtorch on, etc. containers even when empty. Store in a well-ventilated place. Keep cool.
Incompatible products : Keep away from strong acids, strong bases and oxidizing agents.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ethylene glycol (107-21-1)		
ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
ACGIH	Remark (ACGIH)	Upper Respiratory Tract (URT) & Eye irritant
OSHA	Not applicable	

8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Hand protection : Protective gloves.
Eye protection : Safety glasses.
Skin and body protection : Wear suitable protective clothing.
Respiratory protection : If exposed to levels above exposure limits wear appropriate respiratory protection.
Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Color : Red
Odor : Mild
Odor threshold : No data available
pH 50% water solution : 8.6
Relative evaporation rate (butylacetate=1) : Nil
Melting point : Not applicable
Freezing point : -18 °C (0 °F)
Boiling point : 158 °C (242 °F)
Flash point : 116 °C (241 °F) [100% Ethylene Glycol] *ASTM D56*
Auto-ignition temperature : 400 °C (752 °F) [100% Ethylene Glycol] *Literature*
Decomposition temperature : No data available

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Flammability (solid, gas)	: No data available
Vapor pressure	: < 0.1 mm Hg @ 20 °C
Relative vapor density at 20 °C	: No data available
Specific Gravity	: 1.12
Density	: 1.12 kg/l (9.3 lbs/gal)
Solubility	: Water: Complete
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Not applicable.
Oxidizing properties	: Not applicable.
Explosive limits	: 3.2 - 15.3 vol %

9.2. Other information

VOC content	: 0.00 %
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SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Keep away from any flames or sparking source.

10.5. Incompatible materials

Keep away from strong acids, strong bases and oxidizing agents.

10.6. Hazardous decomposition products

alcohols. Aldehydes. Ethers.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Oral: Harmful if swallowed.
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ethylene glycol (107-21-1)	
LD50 oral rat	> 5,000.00 mg/kg (Rat; Literature study)
ATE US (oral)	500.00 mg/kg bodyweight
denatonium benzoate (3734-33-6)	
LD50 oral rat	584.00 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 2,000.00 mg/kg (Rabbit; Literature study)
ATE US (oral)	584.00 mg/kg bodyweight
sodium benzoate (532-32-1)	
LD50 oral rat	> 2,700.00 mg/kg (Rat)
LD50 dermal rat	> 7,940.00 mg/kg (Rat)
LD50 dermal rabbit	2,000.00 mg/kg (Rabbit)
ATE US (dermal)	2,000.00 mg/kg bodyweight
diethylene glycol (111-46-6)	
LD50 dermal rabbit	11,890.00 mg/kg (Rabbit)
ATE US (oral)	500.00 mg/kg bodyweight
ATE US (dermal)	11,890.00 mg/kg bodyweight

Skin corrosion/irritation	: Not classified
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Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).
Aspiration hazard	: Not classified
Symptoms/injuries after ingestion	: The lethal dose in humans is estimated to be 100 mL (3 oz).

SECTION 12: Ecological information

12.1. Toxicity

ethylene glycol (107-21-1)	
EC50 Daphnia 1	> 10,000.00 mg/l (EC50; 24 h)
LC50 fish 2	40,761.00 mg/l (LC50; 96 h; Salmo gairdneri)
denatonium benzoate (3734-33-6)	
LC50 fish 1	> 1,000.00 mg/l (LC50; 96 h; Salmo gairdneri)
EC50 Daphnia 1	13.00 mg/l (EC50; 48 h; Daphnia magna)
sodium benzoate (532-32-1)	
LC50 fish 1	> 100.00 mg/l (LC50; 96 h; Pimephales promelas)
EC50 Daphnia 1	< 650.00 mg/l (EC50; 48 h)
EC50 Daphnia 2	> 100.00 mg/l (EC50; 48 h)
diethylene glycol (111-46-6)	
LC50 fish 1	> 5,000.00 mg/l (LC50; 24 h)
EC50 Daphnia 1	> 10,000.00 mg/l (EC50; 24 h)

12.2. Persistence and degradability

ethylene glycol (107-21-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.
Biochemical oxygen demand (BOD)	0.47 g O ₂ /g substance
Chemical oxygen demand (COD)	1.24 g O ₂ /g substance
ThOD	1.29 g O ₂ /g substance
BOD (% of ThOD)	0.36
denatonium benzoate (3734-33-6)	
Persistence and degradability	Biodegradability in water: no data available. No (test) data on mobility of the substance available.
sodium benzoate (532-32-1)	
Persistence and degradability	Readily biodegradable in water.
diethylene glycol (111-46-6)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil. Photolysis in the air.
Biochemical oxygen demand (BOD)	0.02 g O ₂ /g substance
Chemical oxygen demand (COD)	1.51 g O ₂ /g substance
ThOD	1.51 g O ₂ /g substance
BOD (% of ThOD)	0.02

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12.3. Bioaccumulative potential

ethylene glycol (107-21-1)	
BCF fish 1	10.00 (BCF; 72 h)
BCF other aquatic organisms 1	0.21 - 0.6 (BCF)
BCF other aquatic organisms 2	190.00 (BCF; 24 h)
Log Pow	-1.34 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
denatonium benzoate (3734-33-6)	
BCF fish 1	1.4 - 3.6 (BCF; BCFBAF v3.00)
Log Pow	1.78 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
sodium benzoate (532-32-1)	
Log Pow	0.84
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
diethylene glycol (111-46-6)	
BCF fish 1	100.00 (BCF; Other; 3 days; Leuciscus melanotus; Static system; Fresh water; Experimental value)
Log Pow	-1.98 (Calculated; Other)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

ethylene glycol (107-21-1)	
Surface tension	0.05 N/m (20 °C / 68 °F)
diethylene glycol (111-46-6)	
Surface tension	0.05 N/m
Log Koc	Koc, SRC PCKOCWIN v1.66; 1; Calculated value; log Koc; SRC PCKOCWIN v1.66; 0; Calculated value

12.5. Other adverse effects

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

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Waste disposal recommendations	: Dispose of contents/container, in a safe manner, to appropriate waste disposal facility, in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description	: UN3082 Environmentally hazardous substances, liquid, n.o.s., 9, III
UN-No. (DOT)	: UN3082
Proper Shipping Name (DOT)	: Environmentally hazardous substances, liquid, n.o.s.
Class (DOT)	: 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140
Hazard labels (DOT)	: 9 - Class 9 (Miscellaneous dangerous materials)



Packing group (DOT)	: III - Minor Danger
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203

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DOT Packaging Bulk (49 CFR 173.xxx)	: 241
DOT Symbols	: G - Identifies PSN requiring a technical name
DOT Packaging Exceptions (49 CFR 173.xxx)	: 155
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: No limit
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: No limit
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel
Emergency Response Guide (ERG) Number	: 171
Other information	: Non Bulk: Not regulated by the US D.O.T. (in quantities under 5,000 lbs in any one inner package).

TDG

Refer to current TDG Canada for further Canadian regulations

Transport by sea

Proper Shipping Name (IMDG) : Not regulated by IMDG (in quantities under 5,000 lbs in any one inner package)

Air transport

Proper Shipping Name (IATA) : Not regulated by IMDG (in quantities under 5,000 lbs in any one inner package)

SECTION 15: Regulatory information

15.1. US Federal regulations

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EPA TSCA Regulatory Flag	Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed
ethylene glycol (107-21-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA
CERCLA RQ	5000 lb(s)
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Ethylene glycol is subject to Tier I and/or Tier II annual inventory reporting
SARA Section 313 - Emission Reporting	Ethylene glycol is subject to Form R Reporting requirements.
denatonium benzoate (3734-33-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
diethylene glycol (111-46-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. International regulations

CANADA

WHMIS Classification

EU-Regulations

No additional information available

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

No additional information available

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xn; R22

Full text of R-phrases: see section 16

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National regulations

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DSL (Canada): The intentional ingredients of this product are listed
ECL (South Korea): The intentional ingredients of this product are listed
EINECS (Europe): The intentional ingredients of this product are listed
ENCS (Japan): The intentional ingredients of this product are listed

15.3. US State regulations

California Proposition 65 - This product contains, or may contain, substance(s) known to the state of California to cause cancer, developmental toxicity and/or reproductive toxicity

ethylene glycol (107-21-1)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	Yes	No	No	

ethylene glycol (107-21-1)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

diethylene glycol (111-46-6)

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

SECTION 16: Other information

Full text of H-statements:

H302	Harmful if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure

SDS GHS US (GHS HazCom 2012) OWI

Old World Industries, LLC makes no warranty, representation or guarantee as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of his own use, handling and disposal of this product. Since actual use by others is beyond our control, no warranty, expressed or implied, is made by Old World Industries, LLC as to the effects of such use, the results to be obtained or the safety and toxicity of this product, nor does Old World Industries, LLC assume liability arising out of the use by others of this product referred to herein. The data in this SDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.