



Final Charge Global Antifreeze & Coolant 50/50

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 Antifreeze & Coolant 50/50

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. 1A H360
STOT RE 1 H372

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07



GHS08

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H302 - Harmful if swallowed
H360 - May damage fertility or the unborn child
H372 - Causes 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 a 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

No additional information available

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	<= 50	Acute Tox. 4 (Oral), H302
water	(CAS No) 7732-18-5	< 50	Not classified
diethylene glycol	(CAS No) 111-46-6	< 3	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
4-tert-butylbenzoic acid	(CAS No) 98-73-7	< 2	Acute Tox. 4 (Oral), H302 Repr. 1A, H360 STOT RE 1, H372 Aquatic Chronic 3, H412
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	: 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 breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek immediate medical advice. Allow the victim to rest. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
First-aid measures after skin contact	: Remove contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Rinse immediately with plenty of water (for at least 15 minutes). Get medical advice/attention. Specific treatment (see supplemental first aid instructions on this label).
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. If eye irritation persists: Rinse immediately with plenty of water. Get medical advice/attention.
First-aid measures after ingestion	: Obtain emergency medical attention. Rinse mouth. If the person is fully conscious, make him/her drink two glasses of water. Never give an unconscious person anything to drink. Do NOT induce vomiting. Call a POISON CENTER/doctor/physician if you feel unwell. 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.

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

Symptoms/injuries	: Causes damage to organs (kidneys) (oral). May damage fertility or the unborn child.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard. 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	: Foam. Carbon dioxide. Sand. Water fog. Fine water spray. Alcohol-resistant foam. Dry chemical powder.
Unsuitable extinguishing media	: Do not use a heavy water stream. 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.

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5.3. Advice for firefighters

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

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection. Refer to section 8.2.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Do not breathe dust/fume/gas/mist/vapors/spray.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash affected areas thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Heat sources. Keep container closed when not in use. Product may become solid at temperatures below -37 °C (-34 °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.
- Incompatible products : Keep away from strong acids, strong bases and oxidizing agents.
- Incompatible materials : Sources of ignition.

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)		
USA ACGIH	ACGIH Ceiling (mg/m ³)	100.00 mg/m ³
USA ACGIH	Remark (ACGIH)	Upper Respiratory Tract (URT) & Eye irritant

8.2. Exposure controls

- Personal protective equipment : Avoid all unnecessary exposure. Gloves. Safety glasses.



- Hand protection : Wear protective gloves.
- Eye protection : Chemical goggles or safety glasses.

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Respiratory protection : Wear appropriate mask.
Other information : Do not eat, drink or smoke during use.

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 : 8.6
Relative evaporation rate (butylacetate=1) : Nil
Freezing point : -37 °C (-34 °F)
Boiling point : 106 - 108 °C (224 - 227 °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
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 : 1.07
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 : No data available
Oxidizing properties : No data available
Explosive limits : No data available

9.2. Other information

VOC content : 0.00 %

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. Extremely high or low temperatures.

10.5. Incompatible materials

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

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide. Fume. Alcohols. Aldehydes. Ethers.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

denatonium benzoate (3734-33-6)

LD50 oral rat	584 mg/kg (Rat)
LD50 dermal rabbit	> 2,000 mg/kg (Rabbit)

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denatonium benzoate (3734-33-6)	
ATE US (oral)	584 mg/kg bodyweight
4-tert-butylbenzoic acid (98-73-7)	
LD50 oral rat	735 mg/kg (Rat)
LD50 dermal rabbit	> 2,000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 2 mg/l/4h (Rat; Experimental value,Rat; Experimental value)
ATE US (oral)	735 mg/kg bodyweight
ethylene glycol (107-21-1)	
LD50 oral rat	> 5,000 mg/kg (Rat)
ATE US (oral)	500 mg/kg bodyweight
diethylene glycol (111-46-6)	
LD50 oral rat	12,565 mg/kg (Rat)
LD50 dermal rabbit	11,890 mg/kg (Rabbit)
ATE US (oral)	500 mg/kg bodyweight
ATE US (dermal)	11,890 mg/kg bodyweight
Skin corrosion/irritation	: Not classified pH: 9
Serious eye damage/irritation	: Not classified pH: 9
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: May damage fertility or the unborn child.
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Causes damage to organs (kidneys) through prolonged or repeated exposure (oral).
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful if swallowed.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard. The lethal dose in humans is estimated to be 100 mL (3 oz).

SECTION 12: Ecological information

12.1. Toxicity

denatonium benzoate (3734-33-6)	
LC50 fish 1	> 1,000 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 1	13 mg/l (48 h; Daphnia magna)
4-tert-butylbenzoic acid (98-73-7)	
LC50 fish 1	320 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Nominal concentration)
EC50 Daphnia 1	47 mg/l (48 h; Daphnia sp.; Nominal concentration)
LC50 fish 2	70 mg/l (96 h; Oryzias latipes)
EC50 Daphnia 2	24 mg/l (24 h; Daphnia sp.)
Threshold limit algae 1	1 mg/l (96 h; Selenastrum capricornutum)
Threshold limit algae 2	2 mg/l (96 h; Selenastrum capricornutum; Cell numbers)
ethylene glycol (107-21-1)	
LC50 fish 1	53,000 mg/l (96 h; Pimephales promelas; Static system)
EC50 Daphnia 1	> 10,000 mg/l (24 h; Daphnia magna)
LC50 fish 2	40,761 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Static system)
Threshold limit algae 1	> 10,000 mg/l (168 h; Scenedesmus quadricauda)

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ethylene glycol (107-21-1)	
Threshold limit algae 2	2,000 mg/l (192 h; Microcystis aeruginosa)
diethylene glycol (111-46-6)	
LC50 fish 1	> 5,000 ppm (24 h; Carassius auratus)
LC50 other aquatic organisms 1	1,174 mg/l (Xenopus laevis)
EC50 Daphnia 1	> 10,000 mg/l (24 h; Daphnia magna)
LC50 fish 2	61,072 ppm (168 h; Poecilia reticulata)
TLM fish 1	> 32,000 mg/l (96 h; Gambusia affinis)
TLM other aquatic organisms 1	> 1,000 ppm (96 h)
Threshold limit other aquatic organisms 1	1,174 mg/l (72 h; Xenopus laevis; Toxicity test)
Threshold limit other aquatic organisms 2	10,745 mg/l (16 h; Protozoa; Toxicity test)
Threshold limit algae 1	2,700 mg/l (168 h; Scenedesmus quadricauda)
Threshold limit algae 2	100 mg/l (Selenastrum capricornutum)

12.2. Persistence and degradability

denatonium benzoate (3734-33-6)	
Persistence and degradability	Biodegradability in water: no data available. No (test) data on mobility of the substance available.
4-tert-butylbenzoic acid (98-73-7)	
Persistence and degradability	Not readily biodegradable in water. Highly mobile in soil.
Biochemical oxygen demand (BOD)	0.26 g O ₂ /g substance
Chemical oxygen demand (COD)	2.37 g O ₂ /g substance
ThOD	2.43 g O ₂ /g substance
BOD (% of ThOD)	0.11 % ThOD
ethylene glycol (107-21-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Not established.
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 % ThOD
diethylene glycol (111-46-6)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the 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)	0.015 % ThOD

12.3. Bioaccumulative potential

denatonium benzoate (3734-33-6)	
Log Pow	1.78 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
4-tert-butylbenzoic acid (98-73-7)	
BCF fish 1	3.162 (Cyprinus carpio; Test duration: 6 weeks)
Log Pow	0.76 - 2.68 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
ethylene glycol (107-21-1)	
BCF fish 1	10 (72 h; Leuciscus idus)
BCF other aquatic organisms 1	0.21 - 0.6 (Procambarus sp.; Chronic)
BCF other aquatic organisms 2	190 (24 h; Algae)
Log Pow	-1.34 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500). Not established.
diethylene glycol (111-46-6)	
Log Pow	-1.98

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diethylene glycol (111-46-6)

Bioaccumulative potential	Bioaccumulation: not applicable.
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12.4. Mobility in soil

ethylene glycol (107-21-1)

Surface tension	0.048 N/m (20 °C / 68 °F)
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diethylene glycol (111-46-6)

Surface tension	0.0485 N/m
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12.5. Other adverse effects

Effect on ozone layer	: No additional information available
Effect on global warming	: No known ecological damage caused by this product.
Other information	: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations	: Dispose of contents/container, in a safe manner, to appropriate waste disposal facility, in accordance with local/regional/national/international regulations.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

Transport document description	: UN3082 Environmentally hazardous substances, liquid, n.o.s., 9, III
UN-No.(DOT)	: 3082
DOT NA no.	: UN3082
DOT Proper Shipping Name	: Environmentally hazardous substances, liquid, n.o.s.
Department of Transportation (DOT) Hazard Classes	: 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
DOT Packaging Exceptions (49 CFR 173.xxx)	: 155
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241
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.
Other information	: Non Bulk: Not regulated by the US D.O.T. (in quantities under 5,000 lbs in any one inner package).

ADR

No additional information available

Transport by sea

UN-No. (IMDG)	: Not regulated by IMDG (in quantities under 5,000 lbs in any one inner package)
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Air transport

UN-No.(IATA) : Not regulated by IATA (in quantities under 5,000 lbs in any one inner package)

SECTION 15: Regulatory information

15.1. US Federal regulations

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RQ (Reportable quantity, section 304 of EPA's List of Lists) :	5,000 lb(s) Ethylene Glycol CAS # 107-21-1
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Ethylene glycol is subject to Tier 1 and/or Tier II annual inventory reporting.
SARA Section 313 - Emission Reporting	Ethylene glycol is subject to Form R Reporting requirements.

ethylene glycol (107-21-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 313 (Specific toxic chemical listings)

RQ (Reportable quantity, section 304 of EPA's List of Lists) :	5,000 lb(s)
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15.2. International regulations

CANADA

WHMIS Classification



Class D Division 2
Subdivision A - Very
toxic material
causing other toxic
effects

Final Charge Global Antifreeze & Coolant 50/50

WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
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EU-Regulations

No additional information available

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

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

Not classified

15.2.2. National regulations

No additional information available

15.3. US State regulations

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

SECTION 16: Other information

Full text of H-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Repr. 1A	Reproductive toxicity, Category 1A
Skin Irrit. 2	Skin corrosion/irritation, Category 2

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STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H360	May damage fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H412	Harmful to aquatic life with long lasting effects

NFPA health hazard

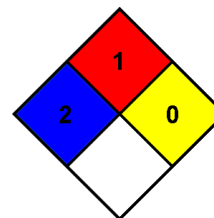
: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard

: 1 - Must be preheated before ignition can occur.

NFPA reactivity

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



HMIS III Rating

Health

: 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability

: 1 Slight Hazard

Physical

: 0 Minimal Hazard

Personal Protection

: B

SDS GHS US (GHS HazCom 2012) OWI

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