

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 11/01/2019

SECTION 1: Identification of the sub	ostance/mixture and of the company/undertaking
1.1. Product identifier	
Product form	: Mixture
Product name	: Fleet Charge Concentrate Antifreeze and Coolant
1.2. Relevant identified uses of the subs	stance or mixture and uses advised against
Use of the substance/mixture	: Antifreeze & Coolant
1.3. Details of the supplier of the safety	data sheet
Old World Industries, LLC 3100 Sanders Road Northbrook, IL 60062 - USA T (847) 559-2000 www.oldworldind.com	
1.4. Emergency telephone number	
Emergency number	: 800 424 9300 (United States); 00 1 703 527 3887 (International) Chemtrec
SECTION 2: Hazards identification	
2.1. Classification of the substance or n	nixture
GHS-US classification	
Acute toxicity (oral), H302	Harmful if swallowed.
Category 4 Specific target organ H373 toxicity — Repeated exposure, Category 2	May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).
Full text of H statements : see section 16	
2.2. Label elements	
GHS-US labelling	
Hazard pictograms (GHS-US)	: CHS07 GHS08
Signal word (GHS-US)	: Warning
Hazard statements (GHS-US)	: Harmful if swallowed. May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).
Precautionary statements (GHS-US)	 Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist, spray, vapors Wash affected areas thoroughly after handling. Do not eat, drink or smoke when using this product. Wear personal protective equipment as required. If swallowed: Immediately call doctor/physician or poison center If swallowed: rinse mouth. Do NOT induce vomiting If inhaled: Remove person to fresh air and keep comfortable for breathing If exposed or concerned: Get medical advice/attention. Store locked up. Dispose of contents/container 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. **Substances**

Not applicable

3.2. Mixtures			
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
water	(CAS-No.) 7732-18-5	< 4	Not classified
denatonium benzoate	(CAS-No.) 3734-33-6	0.003 - 0.005 [30 - 50 ppm]	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

Full text of hazard classes and 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 breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If you feel unwell, seek medical advice.		
First-aid measures after skin contact	: Wash skin with plenty of water. Remove contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Rinse immediately with plenty of water (for at least 15 minutes), Get medical advice/attention.		
First-aid measures after eye contact	: Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice and 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 effect	s, both acute and delayed		
Symptoms/effects	: Causes damage to organs (kidneys) Oral.		
Symptoms/effects after skin contact	: May cause moderate irritation.		
Symptoms/effects after eye contact	: Direct contact with the eyes is likely to be irritating.		
Symptoms/effects 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-methylpyrazaole, 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 occured.

SECTION 5: Firefighting mea	asures
5.1. Extinguishing media	
Suitable extinguishing media	: Carbon dioxide. Dry chemical. Foam. Sand. Water fog.
Unsuitable extinguishing media	: Do not use a heavy water stream. May spread fire.
5.2. Special hazards arising fr	om 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. Product is not flammable or combustible but may burn under fire conditions.
Reactivity	: No dangerous reactions known under normal conditions of use.
5.3. Special protective equipm	nent and precautions for fire-fighters
Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
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SECTION 6: Accidental release measures				
6.1.	Personal precautions, protective equipment and emergency procedures			
6.1.1.	For non-emergency personnel			
Emergen	cy procedures	: Evacuate unnecessary personnel.		
6.1.2.	For emergency responders			
Protective	e equipment	: Equip cleanup crew with proper protection. Refer to section 8.2.		
Emergen	cy 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. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Store away from other materials.		
6.4.	Reference to other sections			
For further information refer to section 13. For further information refer to section 8: "Exposure controls/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.		
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling.		
7.2. Conditions for safe storage, includin	g any incompatibilities		
Storage conditions	: Keep only in the original container in a cool, well ventilated place away from : Heat sources. Direct Sunlight. Keep container closed when not in use. 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.		
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**

denatonium benzoate (3734-33-6)				
Not applicable	Not applicable			
diethylene glycol (111-4	6-6)			
Not applicable				
ethylene glycol (107-21-	-1)			
ACGIH	Local name	Ethylene glycol		
ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³		
ACGIH	ACGIH TWA (ppm)	25 ppm (Vapor fraction)		
ACGIH	ACGIH STEL (mg/m ³)	10 mg/m ³ (Inhalable fraction, Aerosol only)		
ACGIH	ACGIH STEL (ppm)	50 ppm (Vapor fraction)		
ACGIH	Remark (ACGIH)	Upper respiratory tract & eye irritant		
ACGIH Regulatory reference		ACGIH 2018		
water (7732-18-5)				
Not applicable				

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8.2. Appropriate engineering controls

No additional information available

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure. Gloves. Safety glasses.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

Respiratory protection not required in normal conditions. If exposed to levels above exposure limits wear appropriate respiratory protection.



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		
Molecular mass	: 62.07 g/mol Ethylene Glycol		
Color	: Fuschia		
Odor	: Mild		
Odor threshold	: No data available		
pH 50% water solution	: 10.5 - 11		
Relative evaporation rate (butylacetate=1)	: Nil		
Freezing point	: -18 °C (0 °F)		
Boiling point	: 158 °C (317 °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 ℃		
Relative vapor density at 20 °C	: No data available		
Specific Gravity	: 1.12		
Density	: 1.12 kg/l (9.34 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 limits	: 3.2 - 15.3 vol %		
Explosive properties	: No data available		
Oxidizing properties	: No data available		

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9.2. **Other information** : 0 % VOC content **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 No dangerous reactions known under normal conditions of use. 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. Carbon dioxide. Carbon monoxide. Ethers. Fume. **SECTION 11: Toxicological information** 11.1. Information on toxicological effects Acute toxicity : Not classified denatonium benzoate (3734-33-6) LD50 oral rat 584 mg/kg (Rat, Literature study, Oral) LD50 dermal rabbit > 2000 mg/kg (Rabbit, Literature study, Dermal) 584 mg/kg bodyweight ATE US (oral) diethylene glycol (111-46-6) LD50 oral rat 19600 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male, Experimental value, Oral) LD50 dermal rabbit 11890 mg/kg (Rabbit, Dermal) LC50 inhalation rat (mg/l) > 4.6 mg/l/4h (Other, 4 h, Rat, Weight of evidence) ATE US (oral) 500 mg/kg bodyweight ATE US (dermal) 11890 mg/kg bodyweight ethylene glycol (107-21-1) LD50 oral rat 7712 mg/kg bodyweight (according to BASF-internal standards, Rat, Male / female, Experimental value, Aqueous solution, Oral, 7 day(s)) LC50 inhalation rat (mg/l) > 2.5 mg/l (6 h, Rat, Male / female, Experimental value, Inhalation (aerosol)) ATE US (oral) 500 mg/kg bodyweight 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 STOT-single exposure : Not classified : May cause damage to organs (kidneys) through prolonged or repeated exposure (oral). STOT-repeated exposure Aspiration hazard : Not classified Potential adverse human health effects and : Based on available data, the classification criteria are not met. symptoms Symptoms/effects : Causes damage to organs (kidneys) Oral. Symptoms/effects after skin contact : May cause moderate irritation.

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Toxicity

12.1.

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

denatonium benzoate (3734-33-6) LC50 fish 1 > 1,000.00 mg/l (96 h, Salmo gairdneri, Literature study) EC50 Daphnia 1 13.00 mg/l (48 h, Daphnia magna, Literature study) diethylene glycol (111-46-6) LC50 fish 1 > 5,000.00 ppm (24 h, Carassius auratus) EC50 Daphnia 1 > 10,000.00 mg/l (24 h, Daphnia magna) LC50 fish 2 75,200.00 mg/l (Other, 96 h, Pimephales promelas, Flow-through system, Experimental value) EC50 Daphnia 2 > 10,000.00 mg/l (DIN 38412-11, 24 h, Daphnia magna, Static system, Fresh water, Experimental value) ethylene glycol (107-21-1) LC50 fish 1 40,761.00 mg/l (96 h, Salmo gairdneri, Static system) > 10,000.00 mg/l (24 h, Daphnia magna) EC50 Daphnia 1

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.	
diethylene glycol (111-46-6)		
Persistence and degradability	Biodegradable in the soil. Biodegradable in water.	
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	
ethylene glycol (107-21-1)		
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.	
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	

12.3. Bioaccumulative potential

denatonium benzoate (3734-33-6)		
Log Pow	1.78 (Estimated value)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).	
diethylene glycol (111-46-6)		
BCF fish 1	100.00 (Other, 3 day(s), Leuciscus melanotus, Static system, Fresh water, Experimental value)	
Log Pow	-1.98 (Calculated, Other)	
Bioaccumulative potential	Not bioaccumulative.	
ethylene glycol (107-21-1)		
BCF fish 1	10.00 (72 h, Leuciscus idus)	
BCF other aquatic organisms 1	0.21 - 0.6 (Procambarus sp., Chronic)	
BCF other aquatic organisms 2	190.00 (24 h, Algae)	
Log Pow	-1.34 (Experimental value)	
Bioaccumulative potential	Not bioaccumulative.	

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denatonium benzoate (3734-33-6)		
Ecology - soil	No (test)data on mobility of the substance available.	
diethylene glycol (111-46-6)		
Surface tension	0.05 N/m	
Log Koc	0.00 (log Koc, SRC PCKOCWIN v1.66, Calculated value)	
Ecology - soil	Highly mobile in soil.	
ethylene glycol (107-21-1)		
Surface tension	48.00 mN/m (20 °C)	
Ecology - soil	No (test)data on mobility of the substance available.	
12.5. Other adverse effects		
Effect on the ozone layer	: No known effect on the ozone layer	
Other information	: Avoid release to the environment.	
CECTION 42: Dispaged severide retion		
SECTION 13: Disposal considerations	5	
13.1. Waste treatment methods		
Product/Packaging disposal recommendations	: Dispose of contents/container to an approved waste disposal plant.	

: Avoid release to the environment.

Ecology - waste materials

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Non Bulk (in quantities under 5,000 lbs in any one inner package): Not regulated by the US DOT

Bulk (in quantities 5,000 lbs or over in any one inner package):

Transport document description	:	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
Class (DOT)	:	9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140
Packing group (DOT)	:	III - Minor Danger
Hazard labels (DOT)	:	9 - Class 9 (Miscellaneous dangerous materials)
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	203
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.
Other information	:	No supplementary information available.

Transportation of Dangerous Goods

Refer to current TDG Canada for further Canadian regulations

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Transport by sea In accordance with IMDG / IMO	
Proper Shipping Name (IMDG)	: Not regulated by IMDG (in quantites under 5,000 lbs in any one inner package)
Air transport In accordance with IATA / ICAO	
Proper Shipping Name (IATA)	: Not regulated by IATA (in quantites under 5,000 lbs in any one inner package)
SECTION 15: Regulatory inform	ation
15.1. US Federal regulations	
Fleet Charge Concentrate Antifreeze a	nd Coolant
EPA TSCA Regulatory Flag	Toxic Substances Control Act (TSCA): The intentional ingredients of this

EPA ISCA Regulatory Flag	product are listed
denotonium honzoeta (2724.22.6)	
denatonium benzoate (3734-33-6)	
Listed on the United States TSCA (Toxic Substand	ces Control Act) inventory
diethylene glycol (111-46-6)	
Listed on the United States TSCA (Toxic Substand	ces Control Act) inventory
ethylene glycol (107-21-1)	
Listed on the United States TSCA (Toxic Substand Subject to reporting requirements of United States	
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	Refer to Section 2 for the OSHA hazard classification 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.
water (7732-18-5)	
Listed on the United States TSCA (Toxic Substand	ces Control Act) inventory

15.2. International regulations

CANADA	
Fleet Charge Concentrate Antifreeze and Coo	lant
WHMIS Classification	This SDS has been prepared according to the criteria of the Hazardous Products Regulations (HPR) (WHMIS 2015) and the SDS contains all of the information required by the HPR. Applicable GHS information is listed in section 2.2 of this SDS.

15.3. US State regulations

This product can expose you to ethylene glycol, which is known to the State of California to cause birth defects or **WARNING**: other reproductive harm. For more information go to www.P65Warnings.ca.gov.

ethylene glycol (107	7-21-1)				
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	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
No	Yes	No	No		(ingested) 8,700 (oral) µg/day

diethylene glycol (111-46-6)
U.S Pennsylvania - RTK (Right to Know) - Environmental Hazard List

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- 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	
Devision data	

Revision date

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Full text of H-statements:

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated
	exposure.

NFPA health hazard

: 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard NFPA reactivity

: 1 - Materials that must be preheated before ignition can occur. : 0 - Material that in themselves are normally stable, even under fire

conditions.



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.