



# Thermal Charge XL Concentrate Heat Transfer Fluid

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Revision date: 03/13/2017

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : Thermal Charge XL Concentrate Heat Transfer Fluid

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

Use of the substance/mixture : Heat transfer fluid

#### 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](http://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 toxicity (oral), Category 4 H302  
Reproductive toxicity, Category 2 H361  
Specific target organ toxicity — Repeated exposure, Category 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 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	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

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 exposed or concerned: Get medical advice/attention.
- 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 : 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.
- 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: 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 effects, both acute and delayed

- Symptoms/injuries : Causes damage to organs (kidneys) Oral. Suspected of damaging 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-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 occurred.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Water fog. Fine water spray. Foam. Carbon dioxide. Dry chemical powder. Sand.
- 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 the 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. 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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
- 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 -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

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

### 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:

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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
Color	: Red
Odor	: Mild
Odor threshold	: No data available
pH 50% water solution	: 8 - 9
Reserve Alkalinity	: 8 - 12 ml
Relative evaporation rate (butylacetate=1)	: Nil
Freezing point	: -18 °C (0 °F)
Boiling point	: 158 °C (242 °F)
Flash point	: 116 °C (241 °F) [100% Ethylene Glycol] <i>ASTM D56</i>
Auto-ignition temperature	: 400 °C (752 °F) [100% Ethylene Glycol] <i>Literature</i>
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	: 1.14
Density	: 1.14 kg/l (9.47 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 %

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No dangerous reactions known under normal conditions of use.

### 10.2. Chemical stability

Stable.

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### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Extremely high or low temperatures. 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. Carbon dioxide. Carbon monoxide. Fume. alcohols. Aldehydes. Ethers.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Thermal Charge XL Concentrate Heat Transfer Fluid	
ATE US (oral)	500.10 mg/kg bodyweight
<b>ethylene glycol (107-21-1)</b>	
LD50 oral rat	> 5,000.00 mg/kg (Rat; Literature study)
ATE US (oral)	500.00 mg/kg bodyweight
<b>denatonium benzoate (3734-33-6)</b>	
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
<b>sodium benzoate (532-32-1)</b>	
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
<b>diethylene glycol (111-46-6)</b>	
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

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

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

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).

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### SECTION 12: Ecological information

#### 12.1. Toxicity

<b>sodium benzoate (532-32-1)</b>	
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)

#### 12.2. Persistence and degradability

<b>ethylene glycol (107-21-1)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.
Biochemical oxygen demand (BOD)	0.47 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.24 g O <sub>2</sub> /g substance
ThOD	1.29 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.36

<b>denatonium benzoate (3734-33-6)</b>	
Persistence and degradability	Biodegradability in water: no data available. No (test) data on mobility of the substance available.

<b>sodium benzoate (532-32-1)</b>	
Persistence and degradability	Readily biodegradable in water.

<b>diethylene glycol (111-46-6)</b>	
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 <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.51 g O <sub>2</sub> /g substance
ThOD	1.51 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.02

#### 12.3. Bioaccumulative potential

<b>ethylene glycol (107-21-1)</b>	
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).

<b>denatonium benzoate (3734-33-6)</b>	
Log Pow	1.78 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

<b>sodium benzoate (532-32-1)</b>	
Log Pow	0.84
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

<b>diethylene glycol (111-46-6)</b>	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

#### 12.4. Mobility in soil

<b>ethylene glycol (107-21-1)</b>	
Surface tension	0.05 N/m (20 °C / 68 °F)

<b>diethylene glycol (111-46-6)</b>	
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

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### 12.5. Other adverse effects

Effect on ozone layer	: No known effect on the ozone layer
Effect on global warming	: No known effects from this product.
Other information	: Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging disposal recommendations	: Dispose of contents/container 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

### 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
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	: <b>Non Bulk: Not regulated by the US D.O.T. (in quantities under 5,000 lbs in any one inner package).</b>

### 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)
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### Air transport

Proper Shipping Name (IATA)	: Not regulated by IATA (in quantities under 5,000 lbs in any one inner package)
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## SECTION 15: Regulatory information

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### 15.1. US Federal regulations

Thermal Charge XL Concentrate Heat Transfer Fluid	
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	
water (7732-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

### 15.2. International regulations

#### CANADA

Thermal Charge XL Concentrate Heat Transfer Fluid	
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.
potassium p-tert-butylbenzoate (16518-26-6)	
Listed on the Canadian NDSL (Non-Domestic Substances List)	

#### EU-Regulations

No additional information available

#### National regulations

Thermal Charge XL Concentrate Heat Transfer Fluid	
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	



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diethylene glycol (111-46-6)

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

### SECTION 16: Other information

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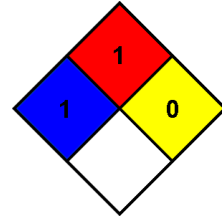
Full text of H-statements:

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

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 are not reactive with water.



HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 °F (93 °C). (Class IIIB)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal Protection : B - Safety glasses, Gloves

SDS GHS US (GHS HazCom 2012) OWI

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