



# Thermal Charge EGSE Concentrate Heat Transfer Fluid

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Revision date: 01/01/2020

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : Thermal Charge EGSE 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  
Recommended use : Contact supplier for more information on uses.

#### 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](http://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 mixture

##### GHS-US classification

Acute toxicity (oral), Category 4 H302 Harmful if swallowed.  
Specific target organ toxicity — Repeated exposure, Category 2 H373 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) :



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

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### 2.4. Unknown acute toxicity (GHS US)

No data available

## 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

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 effects, 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 occurred.

## SECTION 5: Firefighting measures

### 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 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. 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 equipment 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

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.

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, 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

diethylene glycol (111-46-6)		
Not applicable		
ethylene glycol (107-21-1)		
ACGIH	Local name	Ethylene glycol
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
ACGIH	ACGIH TWA (ppm)	25 ppm (Vapor fraction)
ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (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		

#### 8.2. Appropriate engineering controls

No additional information available

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### 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 - 11
Reserve Alkalinity	: 6 - 7.5 ml
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] <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	: 1.12
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

### 9.2. Other information

VOC content	: 0 %
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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

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

<b>diethylene glycol (111-46-6)</b>	
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
<b>ethylene glycol (107-21-1)</b>	
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

STOT-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/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).

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : No additional information available.

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

<b>ethylene glycol (107-21-1)</b>	
LC50 fish 1	40,761.00 mg/l (96 h, Salmo gairdneri, Static system)
EC50 Daphnia 1	> 10,000.00 mg/l (24 h, Daphnia magna)

### 12.2. Persistence and degradability

<b>diethylene glycol (111-46-6)</b>	
Persistence and degradability	Biodegradable in the soil. Biodegradable in water.
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

<b>ethylene glycol (107-21-1)</b>	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
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

### 12.3. Bioaccumulative potential

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

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

### 12.4. Mobility in soil

<b>diethylene glycol (111-46-6)</b>	
Surface tension	0.05 N/m
Log Koc	0.00 (log Koc, SRC PCKOCWIN v1.66, Calculated value)
Ecology - soil	Highly mobile in soil.

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

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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to an approved waste disposal plant.  
Ecology - waste materials : Avoid release to the environment.

### 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

#### Transport by sea

In accordance with IMDG / IMO  
Not regulated

#### Air transport

In accordance with IATA / ICAO  
Not regulated

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### Thermal Charge EGSE Concentrate Heat Transfer Fluid

EPA TSCA Regulatory Flag

Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed

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### diethylene glycol (111-46-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 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	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 Substances Control Act) inventory

## 15.2. International regulations

### CANADA

#### Thermal Charge EGSE 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.
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## 15.3. US State regulations

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

### 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	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

### 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

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Full text of H-statements:

H302	Harmful if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure.

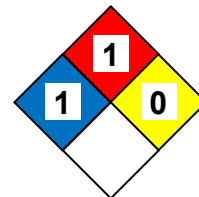


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NFPA health hazard	: 1 - Materials that, under emergency conditions, can cause significant irritation.
NFPA fire hazard	: 1 - Materials that must be preheated before ignition can occur.
NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.



SDS GHS US (GHS HazCom 2012) OWI 1

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