

Safety Data Sheet

GEOTHERMAL-E HEAT TRANSFER FLUID

SDS Revision Date:

04/02/2015



1. Identification

1.1. Product identifier

Product Identity

GEOTHERMAL-E HEAT TRANSFER FLUID

Alternate Names

01-168, 01-167, 01-305, 01-306
Blended Formula,

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

Intended use

See Technical Data Sheet.

Application Method

See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name

ComStar International Inc.
20-45 128th Street,
College Point, NY 11356

Telephone No.

718-445-7900
800-328-0142
Fax: 718-353-5998

2. Hazard(s) identification

2.1. Classification of the substance or mixture

FLAMMABLE LIQUIDS- Category 2

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



Danger

[Prevention]:

P261 Avoid breathing dust / fume / gas / mist / vapors / spray.

P271 Use only outdoors or in a well-ventilated area.

[Response]:

P312 : Call a POISON CENTER or doctor / physician if you feel unwell.

P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.

[Storage]:

No GHS storage statements

[Disposal]:

Safety Data Sheet
GEOHERMAL-E HEAT TRANSFER FLUID

SDS Revision Date:

04/02/2015



No GHS disposal statements

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
PARTICLE SUSPENSION PACKAGE PROPRIETARY, No CAS #	<10	Not classified	[1]
<u>DENATURED ALCOHOL, CAS # 64-17-5</u>	>95	Not classified	[1]
CORROSION INHIBITORS TSR#80100075-5002P	<15	Not classified	[1]
<u>COLOR DYE</u> FOOD QUALITY DYES CAS#: N/A	<1	Not classified	[1]
De-ionized water CAS#: (N/A)	Balance	Not classified	[1]

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
Inhalation	Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
Eyes	Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
Skin	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
Ingestion	If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

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

Overview	No specific symptom data available. See section 2 for further details.
Inhalation	Harmful if inhaled.

Safety Data Sheet

GEOTHERMAL-E HEAT TRANSFER FLUID

SDS Revision Date:

04/02/2015



5. Fire-fighting measures

5.1. Extinguishing media

Water fog, CO₂, dry chemical, universal foams

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: No hazardous decomposition data available.

Avoid breathing dust / fume / gas / mist / vapors / spray.

5.3. Advice for fire-fighters

Wear self-contained breathing apparatus and protective clothing.

ERG Guide No. ---

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

For Large Spills: Flush spill area with water spray. Prevent run-off from entering drains, sewers, or streams, collect run-off.

7. Handling and storage

7.1. Precautions for safe handling

Avoid contact with eyes and skin. Wash thoroughly after handling. Do not breathe vapors or fumes.

Prevention of Fire and Explosion: Keep from contact with oxidizing materials, alkalis and acids. Store away from heat, sunlight and moisture.

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Incompatible materials: Oxidizing agents, alkali metals

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

Safety Data Sheet
GEOTHERMAL-E HEAT TRANSFER FLUID
 SDS Revision Date:

04/02/2015



8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
N/A	PARTICLE SUSPENSION PACKAGE	OSHA	N/A
		ACGIH	N/A
		NIOSH	No Established Limit
		Supplier	No Established Limit
64-17-5	<u>DENATURED ALCOHOL</u>	OSHA	150 ppm
		ACGIH	150 ppm
		NIOSH	No Established Limit
		Supplier	No Established Limit
N/A	CORROSION INHIBITORS	OSHA	150 ppm
		ACGIH	150 ppm
		NIOSH	No Established Limit
		Supplier	No Established Limit
N/A	FOOD QUALITY DYES	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
N/A	De-ionized water	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

Carcinogen Data

CAS No.	Ingredient	Source	Value
N/A	PARTICLE SUSPENSION PACKAGE	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
64-17-5	<u>DENATURED ALCOHOL</u>	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
N/A	CORROSION INHIBITORS	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
N/A	FOOD QUALITY DYES	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

Safety Data Sheet

GEOTHERMAL-E HEAT TRANSFER FLUID

SDS Revision Date:

04/02/2015



N/A	De-ionized water	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

8.2. Exposure controls

Respiratory If engineering controls do not maintain airborne concentrations to an acceptable level, a NIOSH approved respirator must be worn.
Respirator Type: Organic vapor. If respirators are used, a program should be instituted to assure Compliance with OSHA Standard 29 CFR 1910.134.

Eyes Safety glasses with side shields, goggles or face shield are recommended.

Skin Wear overalls to keep skin contact to a minimum.

Engineering Controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances such as poorly ventilated spaces, evaporation from large surfaces, spraying, heating, etc. Recommended Decontamination Facilities: Eye bath, washing facilities.

Other Work Practices Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.
See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

Appearance	Green Liquid
Odor	Slight odor
Odor threshold	Not Measured
pH	Not Measured
Melting point / freezing point	Not Measured
Initial boiling point and boiling range	370 F/188 C
Flash Point	None
Evaporation rate (Ether = 1)	Not Measured
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: 135C(275F): NA Upper Explosive Limit: 199C(390F): NA
Vapor pressure (Pa)	6 mmHg (at 70 F)
Vapor Density	Not Measured
Specific Gravity	> 2 (H2O = 1)
Solubility in Water	Complete
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	(ASTM D 2155): NA
Decomposition temperature	Not Measured

Safety Data Sheet
GEOTHERMAL-E HEAT TRANSFER FLUID

SDS Revision Date:

04/02/2015



Viscosity (cSt) 25C/77F: NA
Volatiles (% by weight) NA
Octanol/Water Partition Coefficient NA
9.2. Other information
 No other relevant information.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

Strong Oxidizers

10.6. Hazardous decomposition products

No hazardous decomposition data available.

11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
PARTICLE SUSPENSION PACKAGE	No data available	No data available	No data available	No data available	No data available
DENATURED ALCOHOL, CAS # 64-17-5	20000 mg/kg Rat	22500 mg/kg Rat	No data available	No data available	No data available
CORROSION INHIBITORS (N/A)	No data available	No data available	No data available	No data available	No data available
FOOD QUALITY DYES (N/A)	No data available	No data available	No data available	No data available	No data available
De-ionized water (N/A)	No data available	No data available	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable

Safety Data Sheet
GEOTHERMAL-E HEAT TRANSFER FLUID
 SDS Revision Date:

04/02/2015



Skin corrosion/irritation	---	Not Applicable
Serious eye damage/irritation	---	Not Applicable
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

12. Ecological information

12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
PARTICLE SUSPENSION PACKAGE	No data available	No data available	Not Available
DENATURED ALCOHOL, CAS # 64-17-5	51400 mg/l	34400 mg/l	Not Available
CORROSION INHIBITORS (N/A)	Not Available	Not Available	Not Available
FOOD QUALITY DYES (N/A)	Not Available	Not Available	Not Available
De-ionized water (N/A)	Not Available	Not Available	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

Safety Data Sheet

GEOTHERMAL-E HEAT TRANSFER FLUID

SDS Revision Date:

04/02/2015



13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	UN 1170	UN 1170	UN 1170
14.2. UN proper shipping name	Ethanol or Ethyl Alcohol or Ethanol Solution	Ethanol or Ethyl Alcohol or Ethanol Solution	Ethanol
14.3. Transport hazard class(es)	DOT Hazard Class: Flammable liquid 3	IMDG: Flammable liquid 3	Air Class: Flammable liquid 3
14.4. Packing group	II	II	II
14.5. Environmental hazards			
IMDG	No		
14.6. Special precautions for user	No further information		

15. Regulatory information

Regulatory Overview	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
Toxic Substance Control Act (TSCA)	All components of this material are either listed or exempt from listing on the TSCA Inventory.
WHMIS Classification	Class B-2 Flammable Liquid/Class D-2B: Material causing other toxic effects
US EPA Tier II Hazards	Fire: Yes Sudden Release of Pressure: No Reactive: No Immediate (Acute): No Delayed (Chronic): No

EPCRA 311/312 Chemicals and RQs:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 302 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Safety Data Sheet

GEOTHERMAL-E HEAT TRANSFER FLUID

SDS Revision Date:

04/02/2015



Proposition 65 - Developmental Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

New Jersey RTK Substances (>1%): Listed

Pennsylvania RTK Substances (>1%): Listed

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

The opinions expressed are those of qualified experts within ComStar International Inc. We believe that the information contained is current as of the date of the Safety Data Sheet. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of ComStar International Inc., it is the user's obligation to determine the conditions of safe use of the product.

End of Document