Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g), Rev. 2012 and GHS Rev 08

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

Product identifier

Product form:	Mixture
Trade name:	Ultratherm LT
Product code:	Ultratherm LT
Recommended application:	Heat Transfer Fluid

Details of the supplier of the safety data sheet

USA Lab

12400 Belden CT Livonia MI 48150
Telephone : 734-855-4890

Emergency telephone number:

Chemtrec: 800-424-9300

SECTION 2: Hazards identification

Classification of the substance or mixture

Aspiration Hazard – category 1
Flammable Liquid – category 4

Label elements

GHS label element:	This product is classified and labeled according to the Globally Harmonized System (GHS)
Hazard pictograms:	GHS08
Signal word:	Danger

Hazard Statements:

H227	Combustible liquid
H304	May be fatal if swallowed and enters airways

Precautionary Statements

P210	Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking
P243	Take precautionary measures against static discharge.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
.	
P301/310/331	IF SWALLOWED. Immediately call a POISON CONTROL CENTRE or doctor/physician.
P331	Do NOT induce vomiting
P403 + P235	Store in a well-ventilated place. Keep Cool.
P405	Store locked up.
P501	Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

Classification system

NFPA Rating: Health: 1, Fire:2, Reactivity:0

Other hazards which do not result in classification
Repeated exposure may cause skin dryness or cracking.

SECTION 3: Composition/information on ingredients

Chemical Characterization: Substance
Classification according to GHS: GHS08
Synonyms: Hydrocarbon C10-C13, n-alkanes, iso-alkanes, <2% aromatics

Chemical Name	Identification	Classification according to GHS	%
C10-13 isoparaffin is a mixture of branched chain aliphatic hydrocarbons	CAS# 68551-17-7 EC # 271-366-9	GHS08 Asp. Haz 1 – H304	100<=

SECTION 4: First aid measures

Description of first aid measures

General advice: Not expected to be a health hazard when used under normal conditions.
Inhalation: Supply person with fresh air and consult doctor according to symptoms. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
Skin contact: Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.
Eye contact: Remove contact lenses. Wash thoroughly for several minutes using copious water. Seek medical help if necessary.
Ingestion: Rinse the mouth thoroughly with water. Do not induce vomiting. Consult doctor immediately. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101°F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing.
Most important symptoms and effects, both acute and delayed: If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever.
Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance.
Protection of first-aiders: When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.
Immediate medical attention, Special treatment: Potential for chemical pneumonitis. Call a doctor or poison control center for guidance.

SECTION 5: Firefighting measures

Suitable extinguishing media: Water spray/ foam/ fog. Dry chemical powder, carbon dioxide, sand or earth
May be used for small fires only.
Unsuitable extinguishing media: Do not use water in a jet.

Special hazards during fire-fighting
In case of fire the following can develop: A complex mixture of airborne solid and liquid particulates and gases (smoke).
Carbon monoxide
Unidentified organic and inorganic compounds

	Flammable vapors may be present even at temperatures below the flash point. The vapor is heavier than air, spreads along the ground and distant ignition is possible. Will float and can be reignited on surface water.
Specific extinguishing methods:	Standard procedure for chemical fires.
Further information:	Keep adjacent containers cool by spraying with water.
Special PE for firefighters:	Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant standards.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures	Observe all relevant local and international regulations. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained. Avoid contact with skin, eyes and clothing. Isolate hazard area and deny entry to unnecessary or unprotected personnel. Do not breathe fumes, vapor. Do not operate electrical equipment.
Environmental precautions:	Shut off leaks, if possible, without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapor or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Monitor area with combustible gas indicator. If leakage occurs, dam spillage and resolve leaks as soon as possible. Prevent fluid from entering drainage systems. If fluid accidently enters drainage system alert authorities
Methods and material for containment and cleaning up	For small liquid spills (< 1 drum), transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely Remove contaminated soil and dispose of safely. For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely Ventilate contaminated area thoroughly. If contamination of site occurs remediation may require specialist advice.

Reference to other sections	See section 7 for information on safe handling, see Section 8 for information on personal protection equipment, see Section 13 for disposal information

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

Technical Measures:	Avoid breathing of or direct contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material. Ensure that all local regulations regarding handling and storage facilities are followed.
Precautions for safe handling:	Avoid inhaling vapor and/or mists. Avoid contact with skin, eyes and clothing. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Use local exhaust ventilation if there is risk of inhalation of vapors, mists or aerosols. Bulk storage tanks should be diked (bunded). When using do not eat or drink. The vapor is heavier than air, spreads along the ground and distant ignition is possible.
Avoidance of contact	Strong oxidizing agents
Product Transfer	Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapor mixtures can occur. Be aware of handling operations that may give rise to additional hazards that result from the accumulation of static charges. These include but are not limited to pumping (especially turbulent flow), mixing, filtering, splash filling, cleaning and filling of tanks and containers, sampling, switch loading, gauging, vacuum truck operations, and mechanical movements. These activities may lead to static discharge e.g. spark formation. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/s until fill pipe submerged to twice its diameter, then ≤ 7 m/s). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations.
Conditions for safe storage:	Storage Temperature: Ambient. Bulk storage tanks should be diked (bunded). Locate tanks away from heat and other sources of ignition. Cleaning, inspection and maintenance of storage tanks is a specialist operation, which requires the implementation of strict procedures and precautions. Must be stored in a diked (bunded) well- ventilated area, away from sunlight, ignition sources and other sources of heat. Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable products which are not harmful or toxic to man or to the environment. Electrostatic charges will be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment to reduce the risk. The vapors in the head space of the storage vessel may lie in the flammable/explosive range and hence may be flammable.
Packaging material:	Suitable material: For containers, or container linings use mild steel, stainless steel., For container paints, use epoxy paint, zinc silicate paint.

Unsuitable material: Avoid prolonged contact with natural, butyl or nitrile rubbers.

Container Advice: Do not cut, drill, grind, weld or perform similar operations on or near containers.

See additional references that provide safe handling practices for liquids that are determined to be static accumulators: American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practices on Static Electricity). IEC/TS 60079-32-1: Electrostatic hazards, guidance

SECTION 8: Exposure controls/personal protection

Engineering measures: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Use sealed systems as far as possible. Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits. Local exhaust ventilation is recommended. Firewater monitors and deluge systems are recommended. Eye washes and showers for emergency use. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

General Information: Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping. Define procedures for safe handling and maintenance of controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with this product. Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation. Drain down system prior to equipment break-in or maintenance. Retain drain downs in sealed storage pending disposal or subsequent recycle.

Personal protective equipment:

Eye protection: Eye protection necessary where liquid could be splashed or sprayed

Skin and body protection: Skin protection is not required under normal conditions of use. For prolonged or repeated exposures use impervious clothing over parts of the body subject to exposure. If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to relevant Standard, and provide employee skin care programs. Wear antistatic and flame-retardant clothing, if a local risk assessment deems it so.

Hand protection: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection.

	Longer term protection: Nitrile rubber gloves. Incidental contact/Splash protection: PVC, neoprene or nitrile rubber gloves for continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.
Respiratory protection:	If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. If air-filtering respirators are suitable for conditions of use: Select a filter suitable for organic gases and vapors [Type A boiling point >65°C (149°F)]. Respirator selection use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 CFR 1910.134.
Hygiene measures:	Wash hands before eating, drinking, smoking and using the toilet. Launder contaminated clothing before re-use. Do not ingest. If swallowed, then seek immediate medical assistance.
Environmental exposure controls:	Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapor. Minimize release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation. Information on accidental release measures are to be found in section 6.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	Liquid
Color:	Colorless
Odor:	Hydrocarbon
Odor threshold:	Data not available
pH-value:	Not applicable
Melting point/freezing point:	Data not available

Initial boiling point and boiling range:	356 – 446 °F (180 - 230°C)
Flash Point ASTM D92 (COC):	> 61°C)
Evaporation Rate:	N/A
Flammability (solid, gas)	Not applicable
Upper explosion limit	7% (V)
Lower explosive limit:	0.5% (V)
Vapor Pressure:	Data not available
Relative vapor density:	Data not available
Relative density:	<0.8
Density:	<800 kg/m3 (15°C / 59 °F)
Solubility	
Water solubility:	Insoluble
Partition coefficient (n-octanol/water):	log Pow: 4.5 - 7
Auto-ignition temperature:	>200°C / >392°F
Decomposition temperature:	Data not available
Viscosity, kinematic:	< 2 mm^2/s (25°C / 77 °F)
Explosive properties	Classification Code: Not classified
Oxidizing properties:	Not applicable

Other information

Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Low conductivity: < 100 pS/m, The conductivity of this material makes it a static accumulator., A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10 000 pS/m., Whether a liquid is nonconductive or semi-conductive, the precautions are the same., A number of factors, for example liquid temperature, presence of contaminants, and antistatic additives can greatly influence the conductivity of a liquid
Surface tension:	Not determined
Solvents content:	Not applicable

SECTION 10: Stability and reactivity

Reactivity:	The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.
Chemical Stability:	No hazardous reaction is expected when handled and stored according to provisions Stable under normal conditions of use.
Possibility of hazardous reactions:	Reacts with strong oxidizing agents.
Conditions to avoid:	Avoid heat, sparks, open flames and other ignition sources. In certain circumstances product can ignite due to static electricity.
Incompatible materials:	Strong oxidizing agents
Hazardous decomposition products:	Hazardous decomposition products are not expected to form during normal storage. Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, Sulphur oxides and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

SECTION 11: Toxicological information

Information on likely routes of exposure — Exposure may occur via inhalation, skin absorption, skin or eye contact and accidental ingestion.

ULTRATHERM LT					
Toxicity/effect	Endpoint	**Value**	**Unit**	**Organism**	**Notes**

Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	Expected to be of low toxicity
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit	Expected to be of low toxicity
Acute toxicity, by inhalation:	LC50	>near saturated vapors concentration	mg/kg/4hr	Rat	

Skin corrosion/irritation: Not classified – Unlikely to cause harm to skin with brief contact, long term contact may cause dermatitis

Serious eye damage/irritation: Not classified – Expected to be non-irritating to eyes
Respiratory or skin sensitization: Not classified – Not expected to be a sensitizer
Germ cell mutagenicity: Not classified – Not expected to be mutagenic
Carcinogenicity: Not classified – Not expected to be carcinogenic

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

Reproductive toxicity: Not classified – Not expected to be a developmental toxicant, not expected to impair fertility.

STOT – single exposure Not expected to be a hazard
STOT – repeated exposure Not expected to be a hazard
Aspiration Toxicity Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

SECTION 12: Ecological information

ULTRATHERM LT					
Toxicity/effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Notes**
Toxicity to fish:	LL50	>100	mg/l	Trout	Expected to be practically non-toxic
Toxicity to daphnia:	EL50	>100	Mg/l		Expected to be practically non-toxic
Toxicity to algae:	EL50	>100	Mg/l		Expected to be practically non-toxic

Persistence and degradability: Expected to be readily biodegradable

Oxidizes readily by photo-chemical reactions in air.

Bio-accumulative potential: Has the potential to bioaccumulate.

Mobility in soil: Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile

Additional ecological information:	Physical properties indicate that hydrocarbon gases will rapidly volatilize from the aquatic environment and that acute and chronic effects would not be observed in practice. Not expected to have ozone depletion potential.

SECTION 13: Disposal considerations

Waste treatment methods

Waste from residues:	Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses Waste product should not be allowed to contaminate soil or ground water or be disposed of into the environment. Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.
For contaminated packing material	Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Send to drum recovery or metal reclaimer. Comply with any local recovery or waste disposal regulations.

SECTION 14: Transport information

Transport statements

UN number	
DOT, ADN, IMDG, IATA:	Non-regulated material
ADR:	Non-regulated material
UN proper shipping name:	
DOT, ADR, ADN, IMDG, IATA:	Non-regulated material
Transport hazard class(es)	
DOT, ADR, ADN, IMDG, IATA:	Non-regulated material
Packaging Group	
DOT, ADR, IMDG, IATA:	Non-regulated material
Environmental hazards	
Marine pollutant:	No
Special precautions for users:	None
Transport in bulk according to Annex II: of MARPOL 73/78and IB Code UN	
Pollution Category	Annex I
Ship Type	Annex I or Double hull vessels with carriage of oil certification
Product name	Gas Oil
Special Precautions:	Refer to section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.
Additional Information	This product is being carried under the scope of MARPOL Annex I. This material is not regulated under 49CFR per 173.120(b)(3) and ASTM D4206 testing This product may be transported under nitrogen blanketing. Nitrogen is an odorless and invisible gas. Exposure to nitrogen may cause asphyxiation or death. Personnel must observe strict safety precautions when involved with a confined space entry.

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

OSHA Hazards	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)
CERCLA Reportable Quantity	This material does not contain any components with a CERCLA RQ
SARA Hazards:	
SARA 304	This material does not contain any components with a section 304 EHS RQ
SARA 311/312	Fire Hazard Acute Health Hazard
SARA 302	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302
SARA 313	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
Clean Water Act	This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act, Section 311, Table 117.3.
Proposition 65:	Based on available information this product does not contain any components or chemicals currently known to the State of California to cause cancer, birth defects or reproductive harm at levels which would be subject to Proposition 65

The components of this product are reported in the following inventories:

DSL:	Listed
ENCS:	Listed
EINECS:	Listed
TSCA:	Listed

Labeling requirements

GHS label element:	This product is classified and labeled according to the Globally Harmonized System

SECTION 16: Other information

Further information

NFPA Rating (Health, Fire, Reactivity)	1, 2, 0

Any abbreviations and acronyms used in this document:

AC	Article Categories
acc., acc. to	according, according to
ACGIH	American Conference of Governmental Industrial Hygienists
ADR	Accord européen relatif au transport international des marchandises Dangereuses par Route
Art., Art. no.	Article number
ATE	Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)
BOD	Biochemical oxygen demand
CAS	Chemical Abstracts Service
CEC	Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants

CLP	Classification, Labeling and Packaging (REGULATION (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures)
CTFA	Cosmetic, Toiletry, and Fragrance Association
e.g.	for example (abbreviation of Latin 'exempli gratia'), for instance
EC	European Community
ECHA	European Chemicals Agency
EEA	European Economic Area
EEC	European Economic Community
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EN	European Norms
EPA	United States Environmental Protection Agency (United States of America)
ERC	Environmental Release Categories
ES	Exposure scenario
Fax.	Fax number
gen.	general
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
HMIS	Hazardous Material Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
IBC (Code)	International Bulk Chemical (Code)
IC	Inhibitory concentration
LC	lethal concentration
LC50	lethal concentration 50 percent kill
LD50	Lethal Dose, 50% kill
MARPOL	International Convention for the Prevention of Pollution from Ships
n.a.	not applicable
n.av.	not available
n.c.	not checked
n.d.a.	no data available
NFPA	National Fire Protection Association
ppm	parts per million
TSCA	US Toxic Substances Control Act
TWA	Time-Weighted Average
UN RTDG	United Nations Recommendations on the Transport of Dangerous Goods
VOC	Volatile organic compounds
WHO	World Health Organization
wwt	wet weight

These statements were made by:

USA Lab
12400 Belden Ct, Livonia MI,48150
Telephone: 734-855-4890
Qualified person's e-mail address:
Sales@usalab.com