Safety Data Sheet

SDS No. 12142

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

DURALIFE® DA SYNTHETIC HEAT TRANSFER FLUID
DA HT/ ISO 32
Product Use : Heat Transfer Oil
Manufacturer :
AMTECOL, Inc.
810 Wright Ave, Richmond, CA 94804, U.S.A.
www.amtecol.com
Transportation Emergency & Emergency spill information :
Call CHEMTREC : (+1) 703-527-3887 (outside the U.S.), 1-800-424-9300 (in the U.S.)
Health Emergency : Amtecol Emergency Information Center : 1-866-268-1888
Other Product Information :
Technical Assistance/SDS info & Customer Service : 1-510-235-7979 Email : info@amtecol.com

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:
Aquatic toxicity, acute hazards Category 1
Aquatic toxicity, chronic hazards Category 1
Classification of mixture is in accordance with United Nations (UN) Globally Harmonized System of Classification and Labelling of Chemicals (GHS), sixth revised edition (2015), and United States Standard 29 CFR 1910 Occupational Safety and Health Standards.

Label Elements

Environmental Hazard
Signal word: Warning

Hazard statements : H411 Toxic to aquatic life with long lasting effects.

SECTION 3. COMPOSITION INFORMATION/ INGREDIENTS

COMPONENTS	CAS NUMBER	% WEIGHT
1,2,3,4-Tetrahydro-5-(1-phenylethyl) naphthalene	60466-61-7	85 - 95
1,2,3,4-Tetrahydro-6-(1-phenylethyl) naphthalene	6196-98-1	< 15

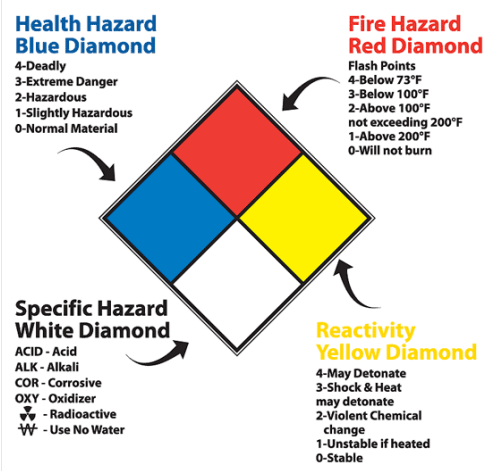
SECTION 4. FIRST AID MEASURES

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If effects occur, consult a physician, preferably an ophthalmologist. Suitable emergency eye wash facility should be available in work area.
Skin Contact: Wash off with plenty of water.
Inhalation(Breathing): Remove to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician. Persons who have inhaled smoke or vapors fumes have to be put under medical observation for at least 48 hours, due to the delayed appearance of poisoning.
Ingestion(Swallowing) : If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.
Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.
Notes to Physician: Maintain adequate ventilation and oxygenation of the patient. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5. FIREFIGHTING MEASURES

Extinguishing Media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.
Unsuitable extinguishing media: Do not use direct water stream. May spread fire.

NFPA 704 HAZARD RATINGS:



Special hazards arising from the substance or mixture
Hazardous combustion products: 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.
Unusual Fire and Explosion Hazards: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Liquid mist of this product can burn. Flammable concentrations of vapor can accumulate at temperatures above flash point; see Section 9.
Protection of Fire Fighters:
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this SDS.
Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep upwind of spill. Ventilate area of leak or spill. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
Environmental precautions: Stop leak if safe to do so. Clean up spill immediately. Prevent from entering into soil, drains or water courses. See Section 12, Ecological Information. Spills or discharge to natural waterways is likely to kill aquatic organisms.
Methods and materials for containment and cleaning up:
Small spills: as far as possible the leaking fluid collection in airtight containers. Absorb with sand, diatomaceous earth or other inert materials,
Large spills: constructing dike or have dug a pit for a large number of the leakage, and transferred to the properly labeled containers, recycling or shipped to the disposal of waste places. Do not put it into the surrounding environment. Ban into the sewer.
See Section 13, Disposal Considerations, for additional information.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with eyes, skin, and clothing. Avoid breathing vapor. Do not eat, drink or smoke when using this product. Wear personal protective equipment Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Store in original container. Store away from incompatible materials. See STABILITY AND REACTIVITY section. Additional storage and handling information on this product may be obtained by calling your sales or customer service contact.
Storage stability
Shelf life: 60 months

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.
Exposure controls
Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.
Individual protection measures
Eye/face protection: Use chemical goggles.
Skin protection
Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.
Other protection: When prolonged or frequently repeated contact could occur, use protective clothing chemically resistant to this material. Selection of specific items such as faceshield, boots, apron, or full-body suit will depend on the task.
Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use an approved air-purifying respirator.
The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : light yellow	**Pour Point :** Not Applicable
Odor : Mild	**Flash Point, closed cup :** 381ºF (194 ºC)
Physical State : Liquid	**Viscosity @ 25 ºC :** 30.8 cSt
Evaporation Rate (nBuAc=1): <0.1	**Vapor Pressure:**< = 1 mmHg @ 20 °C (68 °F)
Boiling Point : 630- 671 ºF (332- 355 ºC)	**Vapor Density (air=1) :** Not Applicable

Melting Point : -29 ºF (- 34ºC)	**pH :** Not Applicable
Specific Gravity : > 1	**Decomposition temperature:** No Data Available
Flammability (solid, gas): N/A	**Auto-ignition Temperature:** 725ºF (385 ºC)
Percent Volatile: Negligible	**Solubility:** insoluble in water
Octanol/Water Partition Coefficient: log Pow: 6.11	**Flammability (Explosive) Limits (% by volume in air):** Lower: Not Applicable Upper: Not Applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity: No data available
Chemical stability: Thermally stable at typical use temperatures.
Possibility of hazardous reactions: Polymerization will not occur.
Conditions to avoid: Exposure to elevated temperatures can cause product to decompose.
Incompatible materials: Avoid contact with oxidizing materials. Avoid contact with: Mineral acids.
Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity
Acute oral toxicity
Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.
LD50, Rat, > 2,000 mg/kg No deaths occurred at this concentration.
Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts.
LD50, Rabbit, > 2,000 mg/kg No deaths occurred at this concentration.
Acute inhalation toxicity
At room temperature, exposure to vapor is minimal due to low volatility. If material is heated or aerosol/mist is produced, concentrations may be attained that are sufficient to cause respiratory irritation and other effects. May cause central nervous system effects. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness.
The LC50 has not been determined.
Skin corrosion/irritation
Brief contact is essentially nonirritating to skin.
Prolonged contact may cause skin irritation with local redness. Repeated exposure may cause irritation, even a burn.
Serious eye damage/eye irritation
May cause moderate eye irritation. Corneal injury is unlikely.
Sensitization
Did not cause allergic skin reactions when tested in guinea pigs.
For respiratory sensitization: No relevant data found.
Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.
Specific Target Organ Systemic Toxicity (Repeated Exposure)

Repeated skin application to laboratory animals did not produce systemic toxicity.

Carcinogenicity

No relevant data found.

Teratogenicity

Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

Reproductive toxicity

In animal studies, did not interfere with reproduction.

Mutagenicity

In vitro genetic toxicity studies were negative.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

1,2,3,4-Tetrahydro-5-(1-phenylethyl)naphthalene

Acute inhalation toxicity

The LC50 has not been determined.

1,2,3,4-Tetrahydro-6-(1-phenylethyl)naphthalene

Acute inhalation toxicity

The LC50 has not been determined.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), Static, 48 Hour, 0.107 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).

EbC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, Biomass, > 0.07 mg/l

Toxicity to bacteria

EC50, activated sludge, 3 Hour, 0.062 mg/l, OECD 209 Test

Persistence and degradability

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability. Material is inherently biodegradable (reaches > 20% biodegradation in OECD test(s) for inherent biodegradability).

10-day Window: Fail

Biodegradation: 6 %

Exposure time: 28 d

Method: OECD Test Guideline 301B or Equivalent

10-day Window: Not applicable

Biodegradation: > 40 %

Exposure time: 28 d

Method: OECD Test Guideline 302B or Equivalent

Bioaccumulative potential

Bioaccumulation: Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

Partition coefficient: n-octanol/water(log Pow): 6.11 Estimated.

Mobility in soil

Expected to be relatively immobile in soil (Koc > 5000).

Partition coefficient (Koc): > 5000 Estimated.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Reclaimer. Incinerator or other thermal destruction device.

SECTION 14. TRANSPORT INFORMATION

DOT
Not regulated for transport
Classification for SEA transport (IMO-IMDG):
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(1,2,3,4-Tetrahydro-5-(1-phenylethyl)naphthalene)
UN number: UN 3082
Class: 9
Packing group: III
Marine pollutant: 1,2,3,4-Tetrahydro-5-(1-phenylethyl)naphthalene
Transport in bulk : Consult IMO regulations before transporting ocean bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code
Classification for AIR transport (IATA/ICAO):
Proper shipping name: Environmentally hazardous substance, liquid, n.o.s.(1,2,3,4-Tetrahydro-5-(1-phenylethyl)naphthalene)
UN number: UN 3082
Class: 9
Packing group: III
This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
No SARA Hazards
Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 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.

U.S. Toxic Substances Control Act (TSCA)

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30. This product contains a substance subject to a TSCA Section 5(a)(2) Significant New Use Rule (SNUR) and export notification under TSCA 12(b). The SNUR is described in 40 CFR 721.5225 and requires the following Hazard Communication information: This substance may be toxic to fish and toxic to aquatic organisms. Notice to users: Disposal restrictions apply, do not release to water.

Pennsylvania Worker and Community Right-To-Know Act:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

United States TSCA Inventory (TSCA)

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

SECTION 16. OTHER INFORMATION

HMIS RATINGS: Health: 1 Flammability: 1 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index
recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

Health and Environmental Label Language

CAUTION : Contains Petroleum Lubricant. Repeated skin contact can cause skin disorders .

ATTENTION : Used motor oil is a possible skin cancer hazard based on animal data. Repeated exposure to oil mist in excess of the OSHA limit (5mg/m3) can result in accumulation of oil droplets in pulmonary tissue .

PRECAUTIONARY MEASURES : Avoid excessive & prolonged skin contact. Wash thoroughly after handling. Avoid generation and inhalation of oil mists .

INSTRUCTIONS IN CASE OF FIRE OR SPILL : In case of fire, use water spray, foam, dry chemical or carbon dioxide. Water spray may be ineffective, but can be used to cool containers. In case of spill, do not use water, soak up with absorbent material .

DON'T POLLUTE, CONSERVE RESOURCES, RETURN USED OIL TO COLLECTION CENTER .

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

OSHA - Occupational Safety and Health Administration	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
ACGIH - American Conference of Government Industrial Hygienists	CAS - Chemical Abstract Service Number
GHS - Globally Harmonized System	SDS - Safety Data Sheet

API - American Petroleum Institute	IMO/IMDG - International Maritime Dangerous Goods Code
DOT - Department of Transportation (USA)	NCEL - New Chemical Exposure Limit
IARC - International Agency for Research on Cancer	NFPA - National Fire Protection Association (USA)
EPA - Environmental Protection Agency	SCBA - Self-Contained Breathing Apparatus
TLV - Threshold Limit Value	NTP - National Toxicology Program (USA)
HMIS -Hazardous Materials Identification System	WHMIS -Workplace Hazardous Materials Information System
NIOSH-National Institute for Occupational Safety and Health	TSCA-Toxic Substances Control Act
CASRN - Chemical Abstracts Service Registry Number	CERCLA - The Comprehensive Environmental Response, Compensation, and Liability Act
INSHT - National Institute for Health and Safety at Work	IOPC - International Oil Pollution Compensation
LEL - Lower Explosive Limit	NE - Not Established
SARA - Superfund Amendments and Reauthorization Act	UEL - Upper Explosive Limit

Prepared by : AMTECOL, Inc.
810 Wright Ave. , Richmond , CA 94804 , U.S.A.

Disclaimer of Warranty : The above information is based on the data of which we are aware and is believed to be correct as of the data hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modification of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

AMTECOL RICHMOND FACILITY

AMERICAN HITECH PETROLEUM & CHEMICALS, INC.
810 WRIGHT AVE, RICHMOND CA 94804 USA
OFFICE TEL: 510-235-7979
FAX: 510-232-4846
EMAIL: INFO@AMTECOL.COM
WEBSITE: WWW.AMTECOL.COM