Safety Data Sheet

SDS No. 12031

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

DURALIFE® TURBINE OIL
PT/T/ ISO 32/46/68/100
Product Use : Turbine 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

Classified Hazards
This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200 (2012)

Label Elements
No classified hazards

SECTION 3. COMPOSITION INFORMATION/ INGREDIENTS

COMPONENTS	CAS NUMBER	% WEIGHT
DISTILLATES, PETROLEUM, HYDROTREATED HEAVY PARAFFINIC BASE OILS	64742-46-7, 64742-47-8, 64742-53-6, 72623-83-7,72623-84-8, 72623-85-9, 72623-86-0, 72623-87-1	70 - 95
ALKYLATED PHENOL	68081-86-7	< 20
DIPHENYLAMINE	122-39-4	<1.5
POLY METHYL METHACRYLATE ESTER	8012-95-1	< 1

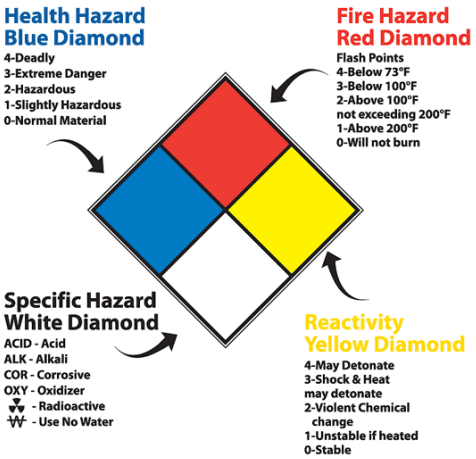
SECTION 4. FIRST AID MEASURES

Eye Contact : No specific first aid measures are required. In case of contact, immediately flush eyes with large amounts of water and continue flushing until irritation subsides. If material is hot, treat for thermal burns and seek immediate medical attention.
Skin Contact : No specific first aid measures are required. In case of contact , no treatment is necessary under ordinary circumstances. Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If material is hot, submerge injured area in cold water. If victim is severely burned, remove to a hospital immediately .

Inhalation(Breathing) : This material has a low vapor pressure and is not expected to present an inhalation exposure at ambient conditions. If vapor or mist is generated when the material is heated, and the victim experiences signs of respiratory tract irritation, remove to fresh air .
Ingestion(Swallowing) : No treatment is necessary under ordinary circumstances. Do not induce vomiting. This material does not present any known ingestion hazard
Most important symptoms and effects, both acute and delayed: Dry skin and possible irritation with repeated or prolonged exposure. Inhalation of oil mists or vapors generated at elevated temperatures may cause respiratory irritation. Accidental ingestion can result in minor irritation of the digestive tract, nausea and diarrhea.
Notes to Physician: Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

SECTION 5. FIREFIGHTING MEASURES

Extinguishing Media : Use dry chemical, foam, water fog or carbon dioxide CO2 to extinguish flames.
NFPA 704 HAZARD RATINGS:



Protection of Fire Fighters:
Fire Fighting Instructions: This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.
Accidental Release Measures : Stop the source of the leak or release. Clean up releases as soon as possible, observing precautions in Exposure Controls/Personal Protection. Contain

liquid to prevent further contamination of soil, surface water or ground-water. Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil.
Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken.
Reporting: Follow prescribed procedures for reporting and responding to larger releases. Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7. HANDLING AND STORAGE

Precautionary Measures: Do not get in eyes, on skin, or on clothing. Keep out of the reach of children. Wash thoroughly after handling.
General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.
Conditions for safe storage: Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material . Protect container(s) against physical damage.
Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force.
"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

General considerations:
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not

adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Occupational Exposure Limits:

Component	ACGIH	OSHA Z-1	Other
Distillates, petroleum, hydrotreated heavy Paraffinic (C15- C50)	TWA: 5mg/m3 STEL: 10 mg/m3 as Oil Mist, if Generated	TWA: 5mg/m3 as Oil Mist, if Generated	

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.

Respiratory Protection: No respiratory protection is normally required. If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge. Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health (IDLH).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Bright Amber	**Pour Point :** < 15.8 ºF (- 9ºC)
Odor : Petroleum odor	**Flash Point :** > 302 ºF (150 ºC)
Physical State : Liquid	**Viscosity @ 40 °C :** 30.0 – 110.0 cSt
Evaporation Rate (nBuAc=1): <1	**Vapor Pressure:**<0.01 mmHg @ 100 °C (212 °F)
Boiling Point : > 700 ºF (371.1 ºC)	**Vapor Density (air=1) :** >1
Melting Point : Not Applicable(N/A)	**pH :** Not Applicable
Specific Gravity : < 1	**Decomposition temperature:** No Data Available

Flammability (solid, gas): N/A	**Auto-ignition Temperature:** No data
Percent Volatile: Negligible	**Solubility :** Soluble in hydrocarbons; insoluble in water
Octanol/Water Partition Coefficient: No data available	**Flammability (Explosive) Limits (% by volume in air):** Lower: Not Applicable Upper: Not Applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity: This material is not expected to react.
Possibility of hazardous reactions: Hazardous reactions not anticipated.
Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous Decomposition Products: Not anticipated under normal conditions of use. During use in engines, contamination of oil with low levels of hazardous fuel combustion by-products may occur. Repeated and prolonged skin contact can cause drying and cracking.
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Serious Eye Damage/Irritation: The eye irritation hazard is based on evaluation of data for product components.
Skin Corrosion/Irritation: The skin irritation hazard is based on evaluation of data for product components.
Skin Sensitization: The skin sensitization hazard is based on evaluation of data for product components.
Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for product components.
Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for product components.
Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for product components.
Acute Toxicity Estimate: Not Determined
Germ Cell Mutagenicity: The hazard evaluation is based on data for components or a similar material.
Carcinogenicity: The hazard evaluation is based on data for components or a similar material.
Reproductive Toxicity: The hazard evaluation is based on data for components or a similar material.
Specific Target Organ Toxicity - Single Exposure: The hazard evaluation is based on data for components or a similar material.
Specific Target Organ Toxicity - Repeated Exposure: The hazard evaluation is based on data for components or a similar material.
Additional Toxicology Information:
This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR

1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3). During use in engines, contamination of oil with low levels of cancer-causing combustion products occurs. Used motor oils have been shown to cause skin cancer in mice following repeated application and continuous exposure. Brief or intermittent skin contact with used motor oil is not expected to have serious effects in humans if the oil is thoroughly removed by washing with soap and water.

SECTION 12. ECOLOGICAL INFORMATION

GHS Classification : No classified hazards

Toxicity: All acute aquatic toxicity studies on samples of lubricant base oils show acute toxicity values greater than 100 mg/L for invertebrates, algae and fish. These tests were carried out on water accommodated fractions and the results are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon compositions.
Persistence and Degradability: The hydrocarbons in this material are not readily biodegradable, but since they can be degraded by microorganisms, they are regarded as inherently biodegradable.
Bioaccumulative Potential: Log Kow values measured for the hydrocarbon components of this material are greater than 5.3, and therefore regarded as having the potential to bioaccumulate. In practice, metabolic processes may reduce bioconcentration.
Mobility in Soil: Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. In water, base oils will float and spread over the surface at a rate dependent upon viscosity. There will be significant removal of hydrocarbons from the water by sediment adsorption. In soil and sediment, hydrocarbon components will show low mobility with adsorption to sediments being the predominant physical process. The main fate process is expected to be slow biodegradation of the hydrocarbon constituents in soil and sediment.
Other adverse effects: None anticipated.

SECTION 13. DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14. TRANSPORT INFORMATION

U.S. Department of Transportation (DOT)
Shipping Description: Petroleum lubricating oil, not regulated as a hazardous material for transportation under 49 CFR
Note: If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil)
International Maritime Dangerous Goods (IMDG)

Shipping Description: Petroleum lubricating oil; not regulated as dangerous goods for transport under the IMDG code
Note: U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 25.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable
International Civil Aviation Org. / International Air Transport Assoc. (ICAO/IATA)
Shipping Description: Petroleum lubricating oil; not regulated as dangerous goods for transport under the ICAO TI or IATA DGR
Note: U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 24.

SECTION 15. REGULATORY INFORMATION

CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):
This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.
CERCLA/SARA - Section 311/312 (Title III Hazard Categories)
Acute (Immediate) Health Hazard: No
Chronic (Delayed) Health Hazard: No
Fire Hazard: No
Pressure Hazard: No
Reactive Hazard: No

REGULATORY LISTS SEARCHED:
01-1=IARC Group 1
01-2A=IARC Group 2A
01-2B=IARC Group 2B
02=NTP Carcinogen
03=EPCRA 313
04=CA Proposition 65
05=MA RTK
06=NJ RTK
07=PA RTK
No components of this material were found on the regulatory lists above.

CERCLA/SARA - Section 313 and 40 CFR 372:
This material does not contain any chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372.
EPA (CERCLA) Reportable Quantity (in pounds):
This material does not contain any chemicals with CERCLA Reportable Quantities.
California Proposition 65:
This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.
National Chemical Inventories:
All components comply with the following chemical inventory requirements: AICS (Australia), DSL(Canada), EINECS (European Union), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines),TSCA (United States).
WHMIS Hazard Class:

None
U.S. Export Control Classification Number: EAR99

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	TSCA-Toxic Substances Control Act

Safety and Health	
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

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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.

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