

MATERIAL SAFETY DATA SHEET



Date Issued: 06/04/2007
MSDS No: DH
Revision No: New MSDS

DIESEL HEXANE BLEND

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: DIESEL HEXANE BLEND
PRODUCT CODE: DH

MANUFACTURER

Tarr, LLC
P.O. Box 12570
Portland OR 97212
Service Number: 503-288-5294

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC (US Transportation) :(800) 424 - 9300
CANUTEC (Canadian Transportation) :(613) 996 - 6666

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: DANGER! Flammable liquid and vapor. Harmful or fatal if swallowed. May cause eye, skin and respiratory tract irritation. May cause asphyxiation, or lung injury if inhaled or swallowed. Can cause central nervous system depression. Can be absorbed by the skin.

POTENTIAL HEALTH EFFECTS

EYES: Can cause moderate eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes. Can injure eye tissue.

SKIN: Liquid is mildly irritating to the skin. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash). Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

INGESTION: Swallowing small amounts of this material during normal handling operations is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

INHALATION: Breathing of vapor or mist is possible. Breathing this material may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

ACUTE TOXICITY: Irritation as noted above. Early to moderate CNS depression may be evidenced by giddiness, headache, dizziness, and nausea; in extreme cases, unconsciousness and death may occur. Target Organ Effects: Prolonged and repeated exposure to n-hexane may cause peripheral neuropathy by damaging peripheral nerve tissue (that of the arms and legs) and result in muscular weakness and loss of sensation. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible liver effects, mild, reversible kidney effects,

nasal damage, nervous system damage, testis damage, lung damage. Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans: visual impairment, central nervous system effects.

MEDICAL CONDITIONS AGGRAVATED: Pre-existing disorders of the following organ(s) or organ system(s) may be aggravated by exposure to this material: respiratory tract, eye, skin, lung (for example, asthma-like conditions), central nervous system, nervous system, male reproductive system.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS
Hexane	15 - 25	000110-54-3
GASOIL - UNSPECIFIED - FUEL, DIESEL NO.2	75 - 85	068476-34-6
GASOIL - UNSPECIFIED - DISTILLATES (PETROLEUM), HYDRODESULPHURIZED MIDDLE	0 - 80	064742-80-9
Distillates (Petroleum), Straight Run Middle	0 - 80	064742-44-2
STRAIGHT RUN Kerosine - Kerosine (Petroleum)	0 - 20	008008-20-6
Kerosine - UNSPECIFIED - Kerosine (Petroleum), HYDRODESULPHURIZED	0 - 20	064742-81-0
CRACKED GASOIL - DISTILLATES (PETROLEUM), LIGHT CATALYTIC CRACKED	0 - 40	064741-59-9
Naphthalene	< 2	000091-20-3

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention, if irritation occurs or persists.

SKIN: Remove contaminated clothing/shoes. Flush skin with water for 15 minutes. Follow by washing with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned.

INGESTION: Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Seek immediate medical attention.

NOTES TO PHYSICIAN: Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in person exposed to this material. this material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity when deciding whether to induce vomiting. See Aggravated Medical Conditions.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: (-10°F) Lowest flash of chemical constituents within product.

FLAMMABLE LIMITS: 0.01 to 4.7

AUTOIGNITION TEMPERATURE: (437°F) to (494°F)

EXTINGUISHING MEDIA: Use regular foam, water fog, carbon dioxide, dry chemical.

HAZARDOUS 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. Combustion may form: Carbon, Dioxide, Carbon Monoxide.

EXPLOSION HAZARDS: Material is highly volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

FIRE FIGHTING PROCEDURES: Clear fire area of unprotected personnel. Fire fighters should wear self contained breathing apparatus. Water spray may be ineffective in fighting the fire but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot burning liquid. Wear a self contained breathing apparatus with full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemicals resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

6. ACCIDENTAL RELEASE MEASURES

GENERAL PROCEDURES: WARNING. Flammable. Ventilate area of leak or spill. Remove all sources of ignition. Clean-up personnel require protective clothing and respiratory protection from vapors. Only specially trained or qualified personnel should handle the emergency.

RELEASE NOTES: US regulations require reporting spills of this material that could reach any surface waters. Report spills to local authorities and/or the the National Response Center at (800) 424-8802 as appropriate or required.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. All five-gallon pails and larger metal containers, including tank cars and tank trucks, should be grounded and/or bonded when material is transferred. Hydrocarbon solvents are basically non-conductors of electricity and can become electrostatically charged during mixing, filtering or pumping at high flow rates. If this charge reaches a sufficiently high level, sparks can form that may ignite the vapors of flammable liquids. Keep away from heat, sparks, and flame. Warning. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignition without the presence of obvious

ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operation conditions. Surfaces that are hot may ignite even liquid product in the absence of sparks or flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors are gone.

COMMENTS: KEEP OUT OF REACH OF CHILDREN! Empty containers retain product residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks static electricity, or other sources of ignition; they may explode and cause injury or death.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)							
		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		SupplierOEL	
Chemical Name		ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
Hexane	TWA	500 ^[1]	1800 ^[1]	50	180	NL	NL
	STEL					NL	NL
STRAIGHT RUN KEROSENE - KEROSENE (PETROLEUM)		TWA			200		100
Naphthalene	TWA	10	50	10	52		
	STEL			15	79		
OSHA TABLE COMMENTS:							
1. NL = Not Listed							

ENGINEERING CONTROLS: Provide exhaust ventilation sufficient to keep the airborne concentration of this product below its exposure limits. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Use chemical safety goggles and/or full face shield where splashing is possible.

Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work areas.

SKIN: Wear resistant gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

RESPIRATORY: If exposure may or does exceed occupational exposure limits (Sec. 8) use a NIOSH approved respirator to prevent overexposure. In accord with 29 CFR 1910.134 use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapors.

WORK HYGIENIC PRACTICES: Use good personal hygiene when handling this product. Wash hands

after use, before eating, drinking, smoking, or using the toilet.

OTHER USE PRECAUTIONS: May be harmful or fatal if swallowed. May irritate body tissues. Use with adequate ventilation. Avoid breathing vapor. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

COMMENTS: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: Hydrocarbon.

COLOR: Clear, colorless liquid.

pH: Essentially neutral.

VAPOR PRESSURE: < 100

VAPOR DENSITY: Heavier than air.

BOILING POINT: 65°C (149°F) to 200°C (392°F)

FREEZING POINT: Not Determined

MELTING POINT: No data available.

FLASHPOINT AND METHOD: (-10°F) Lowest flash of chemical constituents within product.

SOLUBILITY IN WATER: Negligible

DENSITY: 6.7

SPECIFIC GRAVITY: 0.686 to 0.888

(VOC): 6.700 to 6.827

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid heat, sparks, flame and contact with strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide and unidentified organic compounds may be formed during combustion.

INCOMPATIBLE MATERIALS: Strong oxidizers.

11. TOXICOLOGICAL INFORMATION

ACUTE

Chemical Name	ORAL LD ₅₀ (rat)	DERMAL LD ₅₀ (rabbit)
Naphthalene	490	> 20

DERMAL LD₅₀: > 5 ml/kg (rabbit)

ORAL LD₅₀: > 5 ml/kg (rat)

INHALATION LC₅₀: > 5 (Results are for diesel fuel) mg/l (rat) 4 hour(s)

CARCINOGENICITY

NTP: In a study conducted by the National Toxicology Program (NTP), mice exposed to 10 or 30 ppm of naphthalene by inhalation daily for two years had chronic inflammation of the nose and lungs and increased incidences of metaplasia in those tissues. The incidence of benign lung tumors (alveolar/bronchiolar adenomas) was significantly increased in the high-dose female group but not in the male groups. In another two-year inhalation study conducted by NTP, exposure of rats to 10, 30, and 60 ppm naphthalene caused increases in the incidences of a variety of nonneoplastic lesions in the nose. Increases in nasal tumors were seen in both sexes, including olfactory neuroblastomas in females at 60 ppm and adenomas of the respiratory epithelium in males at all exposure levels. The relevance of these effects to humans has not been established. No carcinogenic effect was reported in a 2-year feeding study in rats receiving naphthalene at 41 mg/kg/day.

Notes: This product may contain significant amounts of Polynuclear Aromatic Hydrocarbons (PAH's) which have been shown to cause skin cancer after prolonged and frequent contact with the skin of test animals. Brief or intermittent skin contact with this product is not expected to have serious effects if it is washed from the skin. While skin cancer is unlikely to occur in human beings following use of this product, skin contact and breathing, of mists, vapors or dusts should be reduced to a minimum.

SENSITIZATION: Not expected to be a skin sensitizer.

GENETIC EFFECTS: Naphthalene caused chromosome aberrations and sister chromatid exchanges in Chinese hamster ovary cells, but was not a mutagen in several other invitro tests.

REPRODUCTIVE EFFECTS: Naphthalene did not cause birth defects when administered orally to rabbits, rats, and mice during pregnancy, but slightly reduced litter size in mice at dose levels that were lethal to the pregnant females.

TARGET ORGANS: Laboratory studies have shown that petroleum distillates may cause kidney, liver, or lung damage. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

GENERAL COMMENTS: Developmental Information: This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: Avoid uncontrolled releases of this material. Where spills are possible, a comprehensive spill response plan should be developed and implemented.

AQUATIC TOXICITY (ACUTE)

96-HOUR LC₅₀: 21-210 mg/l (Salmo gairdneri)

48-HOUR EC₅₀: 20-210 mg/l (Daphnia magna)

Notes: 72 hour(s) EC₅₀: 2.6-25 mg/l (Raphidocellus subcapitata)

All information in this section is related to diesel fuel.

This material is expected to be toxic to aquatic organisms.

CHEMICAL FATE INFORMATION: On release to the environment the light components of diesel fuel will generally evaporate but depending on local environmental conditions (temperature, wind, mixing or wave action, soil type, etc.) the remainder may become dispersed in the water column or absorbed to soil or sediment. Diesel fuel would not be expected to be readily biodegradable. In a modified Strum test (OECD method 301B) approximately 40% biodegradation was recorded over 28 days. However, it has been shown that most hydrocarbon components of diesel fuel are degraded in soil in the presence of oxygen. Under anaerobic conditions, such as in anoxic sediments, rates of biodegradation are negligible.

GENERAL COMMENTS: Keep out of waterways.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: The preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

EMPTY CONTAINER: KEEP OUT OF REACH OF CHILDREN! Empty containers retain product residue and can be dangerous. Do not pressurize, cut weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks static electricity, or other sources of ignition.

RCRA/EPA WASTE INFORMATION: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Flammable Liquids, N.O.S.

TECHNICAL NAME: (Hexanes, Diesel Fuel)

PRIMARY HAZARD CLASS/DIVISION: 3

UN/NA NUMBER: UN 1993

PACKING GROUP: II

NAERG: 128

LABEL: Flammable liquid

15. REGULATORY INFORMATION

UNITED STATES

DOT LABEL SYMBOL AND HAZARD CLASSIFICATION

Flammable Liquid

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: This product should be reported as an immediate (acute) health hazard, delayed (chronic) health hazard, and a fire hazard.

FIRE: Yes **PRESSURE GENERATING:** No **REACTIVITY:** No **ACUTE:** Yes
CHRONIC: Yes

313 REPORTABLE INGREDIENTS: n-hexane (CAS 110-54-3), Naphthalene (CAS 91-20-3)

302/304 EMERGENCY PLANNING

EMERGENCY PLAN: To the best of our knowledge, none of the chemicals in this product are listed as an extremely hazardous substance under Section 302 of SARA Title III nor does this product contain any other such substances.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA RQ: n-hexane = 5,000 lbs.,
Naphthalene = 100 lbs.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA REGULATORY: CAS # 110-54-3 is listed on the TSCA inventory.

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains the following substance(s) known to the State of California to cause cancer.: Benzene, Naphthalene.

The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains the following substance(s) known to the State of California to cause reproductive harm.: Benzene.

16. OTHER INFORMATION

PREPARED BY: P. Rodabaugh

REVISION SUMMARY: New MSDS

HMIS RATING

HEALTH:	<input type="checkbox"/>	2
FLAMMABILITY:	<input type="checkbox"/>	2
PHYSICAL HAZARD:	<input type="checkbox"/>	0
PERSONAL PROTECTION:	G	

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