

SAFETY DATA SHEET

Blue Flame HB-16 (All Viscosities)

Prepared according to U.S. OSHA, CMA, ANSI, Canadian WHMIS, Australian WorkSafe, Japanese Industrial Standard JIS Z 7250:2000, and European Union REACH Regulations

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

| | |
|------------------------|--|
| PRODUCT NAME: | Blue Flame HB-16 (All Viscosities) |
| PRODUCT USE: | Engine Oils |
| PRODUCT DESCRIPTION: | Base Oil and Additives |
| CAS# | Mixture |
| MANUFACTURER'S NAME: | D-A Lubricant Company, Inc. |
| ADDRESS: | 801 Edwards Drive, Lebanon, IN 46052 USA |
| EMERGENCY PHONE: | 1-800-899-9004 TOLL-FREE in USA/Canada |
| BUSINESS PHONE: | 1-317-923-5321 (Product Information) |
| WEB SITE: | www.dalube.com |
| DATE OF PREPARATION: | 31 May 2015 |
| DATE OF LAST REVISION: | 16 July 2013 |

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is an amber liquid with a petroleum hydrocarbon odor.

HEALTH HAZARDS: Prolonged or repeated exposure may cause irritation to eyes, respiratory system and skin. Repeated exposure may cause dryness of the skin.

FLAMMABILITY: This product is not classified as a flammable. Flashpoint: >185°C (>365°F) ASTM D-92

ENVIRONMENTAL EFFECTS: The Environmental effects of this product have not been investigated. Floats on water. If it enters soil, it will be absorbed to soil particles and will not be mobile. This product may cause gastrointestinal distress in birds and mammals through ingestion during pelage grooming.

US DOT SYMBOLS

CANADA (WHMIS) SYMBOLS

EUROPEAN and (GHS) Hazard Symbols

Non-Regulated

Not Controlled



Signal Word: **Warning!**

GHS LABELING AND CLASSIFICATION:

Classification of the substance or mixture according to 29CFR1910.1200 and Regulation (EC) No1272/2008 Annex 1

EC# Various Highly Refined Petroleum Base Stocks – Listed in Annex I All are Severely Hydrotreated with less than 3 % DMSO extract as measured by IP 346

Substances not listed either individually or in group entries must be self classified

Components Contributing to Hazard:

Highly refined Mineral Oil

GHS Hazard Classification(s):

Skin Irritation Category 2

Eye Irritation Category 2B

Hazard Statement(s):

H320: Causes eye irritation

H315: Causes skin irritation

Precautionary Statement(s):

P264: Wash hands thoroughly after handling

P280: Wear protective gloves/protective clothing/eye protection/face protection

EU HAZARD CLASSIFICATION PER DIRECTIVE 1999/45/EC:

[Xi] Irritant

Risk Phrases:

R36/38: Irritating to eyes and skin

Safety Phrases:

S24/25: Avoid contact with skin and eyes

S37/39: Wear suitable gloves and eye/face protection

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HEALTH HAZARDS OR RISKS FROM EXPOSURE:

ACUTE:

EYE: Expected to cause mild irritation of the eye if exposed to liquid spray or mist. May cause tearing, or burning of the eyes.

SKIN: May cause mild skin irritation from prolonged or repeated skin contact. Symptoms of irritation may include redness, drying, and cracking of the skin.

INHALATION: No significant adverse health effects are expected to occur upon short-term exposure

INGESTION: Ingestion can cause mild irritation of the digestive tract or cause a laxative effect. Because of the low viscosity of this material, this material can enter the lungs directly by aspiration during swallowing or vomiting. If aspirated into lungs, this material can cause severe lung damage.

CHRONIC: Prolonged or repeated skin contact can cause mild irritation and inflammation characterized by drying, cracking, (dermatitis) or oil acne.

TARGET ORGANS: ACUTE: Eye, Skin

CHRONIC: Skin

SECTION 3 - COMPOSITION and INFORMATION ON INGREDIENTS

| HAZARDOUS INGREDIENTS: | CAS # | EINECS # | ICSC # | WT % | HAZARD CLASSIFICATION; RISK PHRASES |
|---|-------------------|----------|------------|------|--|
| Highly Refined Mineral Oil | See Note Below | Various | Not Listed | >70% | HAZARD CLASSIFICATION: Self Classified: [Xi] Irritant RISK PHRASES: R36/38 |
| Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers). | | | | | |

NOTE: This product can contain any of the following highly refined petroleum base stocks: 64742-01-4, 64742-54-7, 64742-58-1, 64741-88-4, 72623-84-8, 72623-87-1, 64742-46-7, 64742-57-0, 64742-62-7, 64741-89-5, 72623-85-9, 8042-47-5, 64742-52-5, 64742-55-8, 64742-65-0, 72623-83-7, 72623-86-0

ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard *JIS Z 7250: 2000*.

SECTION 4 - FIRST-AID MEASURES

Contaminated individuals of chemical exposure must be taken for medical attention if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take copy of label, bill of lading and/or MSDS to health professional with contaminated individual.

EYE CONTACT: If product enters the eyes, open eyes while under gentle running water for at least 15 minutes.

Remove contact lenses if worn. Seek medical attention if irritation persists.

SKIN CONTACT: Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists.

Remove contaminated clothing. Launder before re-use.

INHALATION: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if breathing difficulty continues.

INGESTION: If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or MSDS with the victim to the health professional.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing skin problems may be aggravated by prolonged contact.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and reduce over-exposure.

SECTION 5 - FIRE-FIGHTING MEASURES

FLASH POINT: >185°C (>365°F) ASTM D-92

AUTOIGNITION TEMPERATURE: Not Established

FLAMMABLE LIMITS (in air by volume, %): Lower (LEL): Not Available Upper (UEL): Not Available

FIRE EXTINGUISHING MATERIALS: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Do not use straight streams of water. This product is a combustible

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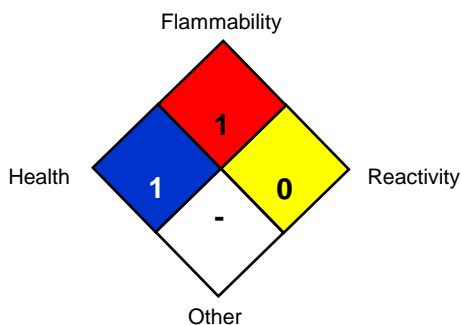
UNUSUAL FIRE AND EXPLOSION HAZARDS: liquid at temperatures above flash point.

Explosion Sensitivity to Mechanical Impact: Not Sensitive.



Explosion Sensitivity to Static Discharge: Not Sensitive

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

NFPA RATING SYSTEM



HMIS RATING SYSTEM

| HAZARDOUS MATERIAL IDENTIFICATION SYSTEM | | | |
|---|-------------|---|------------|
| HEALTH HAZARD (BLUE) | | | 1 |
| FLAMMABILITY HAZARD (RED) | | | 1 |
| PHYSICAL HAZARD (YELLOW) | | | 0 |
| PROTECTIVE EQUIPMENT | | | |
| EYES | RESPIRATORY | HANDS | BODY |
|  | See Sect 8 |  | See Sect 8 |
| For Routine Industrial Use and Handling Applications | | | |

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Personnel should be trained for spill response operations.

SPILLS: Contain spill if safe to do so. Product may create a slip hazard if not cleaned up. Prevent entry into drains, sewers, and other waterways. Soak up with an absorbent material and place in an appropriate container for disposal. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

If spill of any amount is made into or upon navigable waters, the contiguous zone or adjoining shorelines, notify the National Response Center (phone number 800-424-8802).

Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

SECTION 7 - HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors/mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES: Containers of this product must be properly labeled. Store containers in a cool, dry location. Keep container tightly closed when not in use. Protect from physical damage.

Other precautions: For professional industrial use only. Good personal hygiene is important. Empty containers retain residue which can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other ignition sources; they may explode and cause injury or death

SECTION 8 - EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE LIMITS/GUIDELINES:

| Chemical Name | CAS# | ACGIH TWA | OSHA TWA | SWA |
|--------------------------------------|---------|------------------------------|------------------------------|------------------------------|
| Highly Refined Petroleum Base Stocks | Various | 5 mg/m ³ Oil Mist | 5 mg/m ³ Oil Mist | 5 mg/m ³ Oil Mist |

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Currently, International exposure limits are not established for the components of this product. Please check with competent authority in each country for the most recent limits in place.

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above. Use local exhaust ventilation to control airborne vapor. Ensure eyewash/safety shower stations are available near areas where this product is used.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: Not normally required. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

EYE PROTECTION: Safety glasses or chemical goggles as appropriate to prevent eye contact. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

HAND PROTECTION: Use chemical resistant gloves to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

BODY PROTECTION: Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

| | |
|--------------------------------------|---|
| PHYSICAL STATE: | Liquid |
| APPEARANCE & ODOR: | Amber liquid with a petroleum hydrocarbon odor. |
| ODOR THRESHOLD (PPM): | Mild |
| VAPOR PRESSURE (mmHg): | <0.013 kPa (0.1 mm Hg) at 20°C |
| VAPOR DENSITY (AIR=1): | No Data Available |
| EVAPORATION RATE (nBuAc = 1): | No Data Available |
| BOILING POINT (C°): | >260°C (>500°F) |
| MELTING POINT (C°): | No Data Available |
| pH: | No Data Available |
| SPECIFIC GRAVITY: | 0.88 @ 60°F |
| VISCOSITY: | No Data Available |
| SOLUBILITY IN WATER (%): | Negligible |

SECTION 10 - STABILITY and REACTIVITY

STABILITY: Product is stable

DECOMPOSITION PRODUCTS: Material does not decompose under normal storage conditions. When heated to decomposition this product produces carbon dioxide and carbon monoxide.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Strong oxidizers

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Contact with incompatible materials. Excessive heat and high energy sources of ignition.

SECTION 11 - TOXICOLOGICAL INFORMATION

TOXICITY DATA: Toxicity data is not available for mixture: Information given is based on data on the components and toxicology of similar products.

Acute Oral Toxicity LD50 >5,000 mg/kg

Acute Dermal Toxicity LD50 >5,000 mg/kg

SUSPECTED CANCER AGENT: This product does not contain an ingredient(s) that are found on one or more of the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC and therefore is not considered to be, or suspected to be a cancer-causing agent by these agencies.

IRRITANCY OF PRODUCT: Contact with this product can be irritating to exposed skin and eyes.

REPRODUCTIVE TOXICITY INFORMATION: No information concerning the effects of this product and its components on the human reproductive system.

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ADDITIONAL INFORMATION: Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. ALL used oil should be handled with caution and skin contact avoided as far as possible. Continuous contact with used engine oils has caused skin cancer in animal tests

SECTION 12 - ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: It is not expected to be biodegradable. Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: If applied to leaves, this product may kill grasses and small plants by interfering with transpiration and respiration. This product is not toxic to fish but may coat gill structures resulting in suffocation if spilled in shallow, running water. Product may be moderately toxic to amphibians by preventing dermal respiration. This product may cause gastrointestinal distress in birds and mammals through ingestion during pelage grooming.

EFFECT OF CHEMICAL ON AQUATIC LIFE: No evidence is currently available on this product's effects on aquatic life.

SECTION 13 - DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: 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 disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

SECTION 14 - TRANSPORTATION INFORMATION

US DOT; IATA; IMO; ADR:

THIS PRODUCT IS NOT HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME: Non-Regulated Material

HAZARD CLASS NUMBER and DESCRIPTION: : None

UN IDENTIFICATION NUMBER: None

PACKING GROUP: None

DOT LABEL(S) REQUIRED: None

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2004): None

MARINE POLLUTANT: None of the ingredients are classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)

U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS:

This product is not classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:

This product is not classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA):

This product is not classified as Dangerous Goods, by rules of IATA:

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION:

This product is not classified as Dangerous Goods by the International Maritime Organization.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR):

This product is not classified by the United Nations Economic Commission for Europe to be dangerous goods.

SECTION 15 - REGULATORY INFORMATION

UNITED STATES REGULATIONS

SARA REPORTING REQUIREMENTS: This product components are subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act., as follows:

SARA 313 Reporting: Zinc Dialkyl Dithiophosphate CAS#68649-42-3 <0.12%

TSCA: All components in this product are listed on the US Toxic Substances Control Act (TSCA) inventory of chemicals.

SARA 311/312:

Acute Health: Yes

Chronic Health: No

Fire: No

Reactivity: No

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U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): None

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): This product does not contain ingredient(s) which are on the California Proposition 65 lists.

CANADIAN REGULATIONS:

CANADIAN DSL/NDL INVENTORY STATUS: All of the components of this product are on the DSL Inventory

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: No component of this product is on the CEPA First Priorities Substance Lists.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: This product is categorized as "Not Controlled", as per the Controlled Product Regulations

EUROPEAN ECONOMIC COMMUNITY INFORMATION:

EU LABELING AND CLASSIFICATION:

Classification of the mixture according to Regulation (EC) No1272/2008. See section 2 for details.

AUSTRALIAN INFORMATION FOR PRODUCT:

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: All components of this product are listed or exempt on the AICS.

STANDARD FOR THE UNIFORM SCHEDULING OF DRUGS AND POISONS: Not applicable.

JAPANESE INFORMATION FOR PRODUCT:

JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS: The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

INTERNATIONAL CHEMICAL INVENTORIES:

Listing of the components on individual country Chemical Inventories is as follows:

| | |
|---|--------|
| Asia-Pac: | Listed |
| Australian Inventory of Chemical Substances (AICS): | Listed |
| Korean Existing Chemicals List (ECL): | Listed |
| Japanese Existing National Inventory of Chemical Substances (ENCS): | Listed |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS): | Listed |
| Swiss Giftlist List of Toxic Substances: | Listed |
| U.S. TSCA: | Listed |

SECTION 16 - OTHER INFORMATION

Disclaimer: The information in this document is believed to be correct as of the date issued. **HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE.** This information and product are furnished on the condition that the person receiving them shall make his own determination as to the suitability of the product for his particular purpose and on the condition that he assume the risk of his use thereof.