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USA

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200




1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY / UNDERTAKING	
Product Name:	DV LUBE 30 / PR-31 COMPRESSOR FLUID
Uses:	DV LUBE 30 / PR-31 Compressor Fluids are used for the lubrication of air and inert gas compressors.
Supplier:	DV Systems Inc. 490 Welham Road Barrie, Ontario L4N 8Z4 Phone: (705) 728-5657 Fax: (705) 728-4974
Emergency telephone number:	CHEMTREC: 1-800-424-9300 (US and Canada). Poison Control Centre: Consult local telephone directory for emergency number(s).

2. HAZARDS IDENTIFICATION

Emergency Overview	
Appearance and Odour:	Light brown. Liquid at room temperature. Slight hydrocarbon.
Health Hazards:	Not classified as dangerous for supply or conveyance.
Safety Hazards:	Not classified as flammable but will burn.
Environmental Hazards:	Not classified as dangerous for the environment.
Health Hazards:	Not expected to be a health hazard when used under normal conditions.
Health Hazards	
Inhalation:	Under normal conditions of use, this is not expected to be a primary route of exposure.
Skin Contact:	Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Eye Contact:	May cause slight irritation to eyes.
Ingestion:	Low toxicity if swallowed.
Other Information:	Used oil may contain harmful impurities.
Signs and Symptoms:	Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.
Aggravated Medical Conditions:	Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Skin.
Environmental Hazards:	Not classified as dangerous for the environment.
Additional Information:	Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

3. COMPOSITION/INFORMATION ON INGREDIENTS	
Mixture Description: Highly refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.	
4. FIRST-AID MEASURES	
General Information:	Not expected to be a health hazard when used under normal conditions.
Inhalation:	No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
Skin Contact:	Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
Eye Contact:	Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
Ingestion:	In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.
Advice to Physician:	Treat symptomatically.
5. FIRE-FIGHTING MEASURES	
Clear fire area of all non-emergency personnel.	
Flash point:	Typical 240 °C / 464 °F (COC)
Upper / lower Flammability or Explosion limits:	Typical 1 - 10 %(V)(based on mineral oil)
Auto ignition temperature:	> 320 °C / 608 °F
Hazardous Combustion Products and Specific Hazards:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds.
Suitable Extinguishing Media:	Foam, water spray or 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.
Protective Equipment for Firefighters:	Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.
6. ACCIDENTAL RELEASE MEASURES	
Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe the relevant local and international regulations.	
Protective Measures:	Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Clean Up Methods:	Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.
Additional Advice:	Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE					
General Precautions:	Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. 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.				
Handling:	Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.				
Storage:	Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closable containers. Store at ambient temperature.				
Product Transfer:	This material has the potential to be a static accumulator. Proper grounding and bonding procedures should be used during all bulk transfer operations.				
Recommended Materials:	For containers or container linings, use mild steel or high density polyethylene.				
Unsuitable Materials:	PVC.				
Additional Information:	Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.				
8. EXPOSURE CONTROLS / PERSONAL PROTECTION					
					
Occupational Exposure Limits					
Material	Source	Type	ppm	mg/m ³	Notation
Oil mist, mineral	ACGIH	TWA (Inhalable fraction)		5 mg/m ³	
Oil mist, mineral	OSHA Z1	PEL (Mist)		5 mg/m ³	
Biological Exposure Index (BEI):	No biological limit allocated.				
Consult local authorities for acceptable exposure limits within their jurisdiction.					
Exposure Controls:	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: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated. 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 for subsequent recycle. 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.				
Personal Protective Equipment:	Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.				

8 . EXPOSURE CONTROLS / PERSONAL PROTECTION (CONT'D)	
Respiratory Protection:	No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. 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 suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65°C(149 °F)].
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: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, 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. 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 may be 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.
Eye Protection:	Wear safety glasses or full face shield if splashes are likely to occur.
Protective Clothing:	Skin protection not ordinarily required beyond standard issue work clothes.
Monitoring Methods:	Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analyzed by an accredited laboratory. Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available. National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/ Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/ Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/ Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany. http://www.dguv.de/inhalt/index.jsp L'Institut National de Recherche et de Sécurité, (INRS), France http://www.inrs.fr/accueil
Environmental exposure controls:	Take appropriate measures to fulfil the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given in Chapter 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

9 . PHYSICAL AND CHEMICAL PROPERTIES	
Appearance:	Light brown. Liquid at room temperature.
Odour:	Slight hydrocarbon.
pH:	Not applicable
Initial Boiling Point and Boiling Range:	> 280 °C / 536 °F estimated value(s)
Pour point:	Typical -33 °C / -27 °F
Flash point:	Typical 240 °C / 464 °F (COC)
Upper / lower Flammability or Explosion limits:	Typical 1 - 10 %(V) (based on mineral oil)
Auto-ignition temperature:	> 320 °C / 608 °F
Vapour pressure:	< 0.5 Pa at 20 °C / 68 °F [estimated value(s)]
Specific gravity:	Typical 0.899 at 15 °C / 59 °F
Density:	Typical 899 kg/m3 at 15 °C / 59 °F
Water solubility:	Negligible.
n-octanol/water partition coefficient (log Pow):	> 6 (based on information on similar products)
Kinematic viscosity:	Typical 100 mm ² /s at 40 °C / 104 °F
Vapour density(air=1):	> 1 [estimated value(s)]
Electrical conductivity:	This material is not expected to be a static accumulator.
Evaporation rate (nBuAc=1):	Data not available
10. STABILITY AND REACTIVITY	
Stability:	Stable.
Conditions to Avoid:	Extremes of temperature and direct sunlight.
Materials to avoid:	Strong oxidizing agents.
Hazardous decomposition products:	Hazardous decomposition products are not expected to form during normal storage.
11. TOXICOLOGICAL INFORMATION	
Basis for Assessment:	Information given is based on data on the components and the toxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Routes of Exposure:	Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Acute Oral Toxicity:	Expected to be of low toxicity: LD50 > 5000 mg/kg , Rat.
Acute Dermal Toxicity:	Expected to be of low toxicity: LD50 > 5000 mg/kg , Rabbit.
Acute Inhalation Toxicity:	Not considered to be an inhalation hazard under normal conditions of use.
Skin Irritation:	Expected to be slightly irritating.
Eye Irritation:	Expected to be slightly irritating.
Respiratory Irritation:	Inhalation of vapours or mists may cause irritation.

Sensitization:	Not expected to be a skin sensitizer.
Repeated Dose Toxicity:	Not expected to be a hazard.
Mutagenicity:	Not considered a mutagenic hazard.
Carcinogenicity:	Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).
Material:	Carcinogenicity Classification
Highly refined mineral oil (IP346 <3%)	ACGIH Group A4: Not classifiable as a human carcinogen.
Highly refined mineral oil (IP346 <3%)	IARC 3: Not classifiable as to carcinogenicity to humans.
Highly refined mineral oil (IP346 <3%)	GHS / CLP: No carcinogenicity classification
Reproductive and Developmental Toxicity:	Not expected to be a hazard.
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.

12. ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

Acute Toxicity:	Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l (to aquatic organisms)(LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract). Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.
Mobility:	Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.
Persistence/degradability:	Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.
Bioaccumulation:	Contains components with the potential to bioaccumulate.
Other Adverse Effects:	Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL CONSIDERATIONS

Material Disposal:	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.
Container Disposal:	Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand.
Local Legislation:	Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION	
US Department of Transportation Classification (49CFR)	This material is not subject to DOT regulations under 49 CFR Parts 171-180.
IMDG	This material is not classified as dangerous under IMDG regulations.
IATA (Country variations may apply)	This material is either not classified as dangerous under IATA regulations or needs to follow country specific requirements.
15. REGULATORY INFORMATION	
The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.	
WHMIS Class/Description	THIS PRODUCT IS NOT A WHMIS CONTROLLED SUBSTANCE.
Federal Regulatory Status	
Notification Status	
EINECS:	All components listed or polymer exempt.
TSCA:	All components listed.
DSL:	All components listed.
DV Systems classifies this material as an "oil" under the CERCLA Petroleum Exclusion, therefore releases to the environment are not reportable under CERCLA.	
SARA Hazard Categories (311/312)	No SARA 311/312 Hazards.
State Regulatory Status	
California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)	This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
16. OTHER INFORMATION	
NFPA Rating (Health, Fire, Reactivity):	0, 1, 0
SDS Version Number:	1.1
SDS Effective Date:	06-Jan-2015
SDS Revisions:	A vertical bar () in the left margin indicates an amendment from the previous version.
SDS Regulation:	The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
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