

MATERIAL SAFETY DATA SHEET



1. PRODUCT AND COMPANY IDENTIFICATION INFORMATION

PRODUCT NAME VASLUB OILS

PRODUCT USE MINERAL OIL

COMPANY ADDRESS VASOIL CO LTD
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EMERGENCY USE PHONE No 112

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: Distillates (petroleum), Hydrotreated heavy paraffinic

CAS registry number: 64742-54-7 **EINECS number:** 265-157-1

Chemical Description: A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C20 through C50. It contains a relatively large proportion of saturated hydrocarbons.

Formula: Mixture of Hydrocarbons C_nH_{2n+2}

Hazardous Constituents: The severely refined mineral oils contains <3% (w/w) DMSO-extract, according to IP 346.

3. HAZARDS IDENTIFICATION

This material is not considered to be hazardous under normal use conditions, but it should be handled in accordance with good industrial hygiene and safety practices.

PHYSICAL/CHEMICAL DANGERS Not classified as dangerous or flammable. Its combustion, however, may be possible.

DANGERS TO HUMANS Not classified as dangerous.

DANGERS TO THE ENVIRONMENT

EYES This material is not expected to cause eyes irritation.

SKIN This material is not expected to cause skin irritation.

INHALATION Not expected to be harmful if inhaled.

INGESTION Not expected to be harmful if swallowed.

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4. FIRST AID MEASURES

EYES	No specific first aid measures are required because this material is not expected to cause eye irritation. As a precaution, remove contact lenses, if worn, and flush eyes with water.
SKIN	No specific first aid measures are required because this material is not expected to cause skin irritation. As a precaution, remove clothing and shoes, if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing gear, or wash thoroughly, if possible, before re-use.
INHALATION	No specific first aid measures are required because this material is not expected to be harmful, if inhaled. If a person inhales the material in excessive levels, remove it to fresh air. Get medical assistance if coughing or respiratory discomfort occurs and insists.
INGESTION	No specific first aid measures are required because this material is not expected to be harmful, if swallowed. Do not induce vomiting. As a precaution, give the exposed (conscious) person a glass of milk and seek medical assistance.

5. FIRE FIGHTING MEASURES

CLASSIFICATION	Not classified as flammable or combustible.
FLASH POINT (COC)	>190°C typical value.
EXTINGUISHING MEASURES	CO ₂ or Dry chemical – Foam – Water fog.
EXTINGUISHING MEASURES NOT TO BE USED	
FIRE FIGHTING PROCESS	In case of a fire in progress, do not enter a confined area without any protection equipment, including a self-containing breathing apparatus.
COMBUSTION PRODUCTS	Highly dependent on combustion conditions. If burnt, a mixture of liquids, airborne solids, and gases, including CO ₂ , CO, Ca, N, S, P, and Zn oxides, and other unidentified organic compounds will be produced.

6. ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS	Stop the source of the release, if possible, without any further risk. Contain the leak to prevent further contamination of soil, surface water or ground water. Clean up the spill as soon as possible by using appropriate techniques, such as the application of non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place the contaminated material in disposable containers and dispose of in a manner consistent with existing applicable regulations. In case of a spillage at sea, approved dispersants may be used, if authorized by the appropriate government/regulatory authorities.
PERSONAL PRECAUTIONS	Eliminate all sources of ignition in vicinity of spilled material.

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7. HANDLING AND STORAGE

ENVIRONMENTAL PRECAUTIONS Prevent from entering into drainage systems, rivers and bodies of water. Absorb liquid with sand and or earth. Sweep up and remove to suitable container for disposal.

PERSONAL PRECAUTIONS Avoid contact with skin and eyes. Wear a full-face visor or chemical goggles as appropriate. Wash hands thoroughly after contact. Good working practices and high standards of personal hygiene must be maintained at all times.

HANDLING-STORAGE Keep in a cool, dry, well-ventilated place. Use properly labelled and closed containers. Avoid direct contact with sunlight, other heat sources, and strong oxidizing agents. Containers are not designed to contain pressure. Do not use pressure to empty containers as it may rupture with explosive force. Empty containers retain product residues (solid, liquid, and/or vapour) that 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. Empty containers should be completely drained, properly closed, and promptly returned to a drum reformer, or disposed of properly.

STORAGE TEMPERATURE From 0°C up to 50°C

STORAGE MATERIALS For the containers, mild steel or high-density polyethylene. Avoid PVC.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES This material contains base oil.
OSHA Permissible Exposure Limit (PEL) of 5 mg/m³ (for mineral oil mist).
OSHA Short Term Exposure Limit (STEL) is 10mg/m³.

HYGIENE MEASURES Wash hands after handling compounds, or before eating, smoking, using the lavatory, as well as at the end of the day.

CONTROL MEASURES Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. All chemicals should be assessed as to their risk to health and appropriate control measures should be put in place to prevent or adequately control exposure. A hierarchy of control measures exist (e.g. elimination, substitution, general ventilation, containment, systems of work, changing the process or activity) that must be considered before the use of personal protective equipment. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained. Your supplier of personal protective equipment should be consulted on selection and appropriate standards. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

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. Suggested materials for protective gloves include: Nitrile Rubber, Silver Shield, Viton.

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.

RESPIRATORY PROTECTION No respiratory protection is normally required. In case of an oil mist generation, determine if airborne concentrations are below the OSHA Permissible Exposure Limit (PEL) of 5 mg/m³ for mineral oil mist. If not, wear a NIOSH 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 if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

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9. CHARACTERISTICS (TYPICAL PROPERTIES)

SAE / ISO	22,32,46,68,100,150,220,320&460
APPEARANCE	Brown liquid
ODOUR	Mild
pH	Not specified.
EVAPORATION RATE	Not specified.
VAPOUR DENSITY	Not specified.
VOLATILITY	Not specified.
BOILING POINT, °C	Not specified.
VAPOUR PRESSURE	Not specified.
FLAMMABILITY UPPER AND LOWER LIMITS	Not specified.
SOLUBILITY	Soluble in hydrocarbons; insoluble in water.

<u>VASOIL</u> <u>BRAND</u>	ISO	Mass	Flash	Pour	Kinematic	Viscosity	Viscosity
	Viscosity Grade	Density	point	point			Index
		@ 15 C Kg / lt	ASTM C	D93 C	40 C	100 C	
VASLUB OILS	22	0,870	200	-10	22,00	4,22	90
	32	0,872	205	-10	32,00	5,41	103
	46	0,875	240	-10	46,00	6,80	101
	68	0,884	250	-10	68,00	8,70	100
	100	0,890	260	-10	100,00	11,40	100
	150	0,891	265	-10	150,00	15,00	100
	220	0,892	271	-10	204,82	18,01	96
	320	0,894	288	-8	297,65	23,04	96
	460	0,896	289	-8	460,00	30,80	97

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10. STABILITY AND REACTIVITY

CHEMICAL STABILITY	This material is considered stable under normal ambient, and anticipated storage and handling conditions of temperature and pressure.
INCOMPARTIBILITY	May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
HAZARDOUS POLYMERISATION	Polymerisation will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS	Not expected to occur, if stored properly.

11. TOXICOLOGY INFORMATION

No component of this product at levels greater than 0.1% is identified as a carcinogen by ACGIH, the International Agency for Research on Cancer, or the European Commission.

EYE IRRITATION	Expected to be slightly irritating.
SKIN IRRITATION	Expected to be slightly irritating.
INHALATION	If mists are inhaled, slight irritation of the respiratory tract may occur.
INGESTION	Unlikely to prove harmful, if a small quantity is swallowed. The swallowing of a larger quantity may cause diarrhea or nausea.
REPRODUCTIVE TOXICITY	Not considered to be toxic in reproduction.
CARCINOGENESIS	Product is based on mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Other components are not known to be associated with carcinogenic effects.
MUTAGENICITY	Not considered to be a mutagenic hazard.

12. ECOLOGICAL INFORMATION

PERSISTENCE / DEGRADABILITY	Inherently biodegradable.
GROUND MOBILITY	Spillages may penetrate the soil causing ground water contamination.
BIOACCUMULATION POTENTIAL	This product is not expected to bioaccumulate through food chains in the environment.
ENVIRONMENTAL HAZARDS	Unlikely to be harmful to aquatic organisms.

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13. DISPOSAL CONSIDERATIONS

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Where possible, arrange for product to be recycled, according to Directive 75/439 EEC. If disposed of, an authorized person/ licensed waste disposal contractor must be contacted in accordance with local regulations.

14. TRANSPORT INFORMATION

ICAO, IATA, ADR, RID, UN

Not classified as dangerous during transportation.

15. REGULATORY INFORMATION

E.C. (E.I.N.E.C.S.)

Not classified.

LABEL REQUIREMENTS

According to Directives 1999/45 EEC and 67/548 EEC.

16. OTHER INFORMATION

The above information is based on the data of which we are aware and is believed to be correct as of the date 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 modifications 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.