

* 1 - Preparation and company identification

Identification of the preparation PAG OIL ISO 46 for HFO 1234YF 1L
38838
Preparation use Compressor lubricant.
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* 2 - Hazards identification

Not dangerous good.

Hazards The substance is not regarded as hazardous according to the Directive 1272/2008/EEC.

Main risks to health/environment No particular risks in normal working conditions. We recommend, however, to keep normal personal hygiene and to avoid frequent and prolonged contact. Use according to good working practice avoiding to disperse the product in the environment.

Other hazards This product does not contain any PBT or vPvB substances.

* 3 - Composition / Information on ingredients

The preparation does not contain any substance that require the declaration in accordance with regulamentation CE 1272/2008.

Components information The content of DMSO extract, determined with the IP 346/92 method is lower than 3% in weight.

Chemical composition Synthetic base oil with additives.

4 - First aid measures

Inhalation If exposed to high concentration of vapours and fogs move the person from contaminated area to well ventilated place. With labored breathing, provide oxygen. If respiratory arrest occurs make ventilation. If suspected inalathion, seek medical assistance.

Contact with the skin Remove contaminated clothes and wash with soap and plenty of water. If irritation persist, get medical attention.

Contact with the eyes Immediately flush eyes with plenty of water for a few minutes while keeping eyelids open. Get medical attention.

Ingestion Do not induce vomit to avoid aspiration through the respiratory tract. Get medical attention.

5 - Fire-fighting measures

Fire-fighting equipment	Extinguish flames with foam, dry chemicals, CO ₂ .
Inappropriate extinguishers	Do not use direct water jets. Use water jets just to cool down surfaces exposed to fire.
Specific dangers in case of exposition to the chemicals, its combustion products or gases	Avoid breathing combustion fumes that, in case of fire, can form carbon monoxide fuel gases, carbon dioxide, sulphur, phosphorus, nitrogen and unburnt hydrocarbon compounds and other derivatives potentially dangerous.
Specific protective equipment for fire-fighting personnel	Wear protective overalls with self-breathing equipment.

6 - Accidental release measures

Person - related safety precautions	Wear gloves, protecting clothes and glasses. In case of indoors significant spill avoid to breathe vapours by ventilating the area or by wearing breath protecting equipment. Remove possible ignition sources.
Environmental precautions	Avoid to disperse the product in ground, into sewers and into surface waters. If necessary inform local authorities.
Decontamination procedures	In case of significant spillage, stem and transfer product to suitable containers. Spillage on ground: stem spilled product with soil or sand, clean up spilled product and dispose according to local regulations. Spillage in water: stem immediately the spillage. Mechanically remove spilled product from the surface.

7 - Handling and storage

Handling	Avoid direct contacts with the product. Do not breathe aerosol or product mist guaranteeing a suitable ventilation in working areas. Do not smoke and avoid any contact with ignition sources. Keep containers closed when not used.
Storage	Keep the product in original containers. Storage in a fresh place, away from heating sources and direct sun exposition. Avoid to accumulate electrostatic charge. Keep closed and covered the containers to avoid infiltrations of rain. Maintain suitable ventilation of the work place.
Empty containers	The containers contain product residues. Dispose the containers in safe ecological way according to the local regulations.

* 8 - Exposure controls / personal protection

According to data in our possession, any component presents no exposure limits in working place.

Exposure control	Avoid the formation of hazes or aerosol and use engineering controls, ventilation or localized aspiration if necessary.
Breathing equipment	Not necessary under normal working conditions.
Hands and skin protection	Wear gloves and protective overalls; change immediately contaminated clothes and wash them thoroughly before use. We recommend to keep normal personal hygiene and of working clothes. Wear gloves only after having thoroughly washed your hands.
Eyes protection	Wear safety protective glasses where it is possible to be in contact with the product.

9 - Physical and chemical properties

Physical status- :	Liquid
Colour- :	Colourless
Odour- :	Typical
pH :	5,5 - 7,5 (16,7% Isopropyl alcohol/water 10/6)
Water Solubility- :	Partially soluble
Density at 15°Ckg/l :	0,997
Kinematic Viscosity at 40°CcSt :	48.2
Flash Point (C.O.C.)°C :	205
Pour Point°C :	-39
Boiling pointPa :	Decompose before boiling

10 - Stability and reactivity

Conditions to avoid	High temperature (>150°C) can cause decomposition with development of odorous and toxic smoke.
Reactivity and materials to avoid	Avoid contacts with strong acid, strong bases and oxidation agents. Avoid extreme heat and high energy sources of ignition.
Stability	Stable product in normal applications.

11 - Toxicological information

Chronic toxicity	Exposure to oil vapour that exceeds Professional Inhalation Limits can cause respiratory system irritations.
Skin contact	LD50 skin (rabbit) > 2000 mg/kg (estimated). Frequent and continuous contacts could degrease skin and cause dermatitis.
Eyes contact	It can cause light irritation.
Oral toxicity	LD50 (rats): > 2000 mg/kg (estimated). The product if ingested can irritate the digestive apparatus and induce vomiting, cause nausea and diarrhea.
Inhalation	Long term exposure to the product mist can cause irritation to the respiratory system.

* 12 - Ecological information

Mobility	Logarithm of the coefficient of distribution ottanolo/water is considered to be < 3.
Degradability	Not determined.
Accumulation	For this product a low potential of bioconcentration is estimated.
Ecotoxicity	In compliance with EEC Regulations the product is not regarded as hazardous to the environment.

13 - Disposal considerations

General information	Do not dispel the environment. Comply with the current laws.
Disposal	Avoid to disperse the product on ground, into sewers and surface waters. Discharge the exhausted products and the containers through the authorized industries in compliance with the state and local regulations for disposal of this type of waste.

14 - Transport information

ADR-Classe:	Not dangerous
IATA-Classe:	Not dangerous
IMDG-Classe:	Not dangerous

Transport name PAG OIL 46 for HFO 1234YF 11.032YF

* 15 - Regulatory information

Reference Laws	This Safety Data Sheet complies with the Regulation n.453/2010. Regulation (CE) n.1907/2006 (REACH); Regulation (CE) n.1272/2008 (GHS/CLP); I
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ATP n.790/2009; II ATP n.86/2011; III ATP n.618/2012; IV ATP n.487/2013.

Refer also to local laws.

*** 16 - Other information**

Relevant H phrases

Warning

The information presented in this Material Safety Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. The purpose of this data sheet is to inform and assume a correct technological use of the product. NRF B.V. does not take any responsibility resulting from any damage or injury resulting from abnormal use.