**\* 1 - Preparation and company identification**

Identification of the preparation PAG OIL ISO 46 for HFO 1234YF 250ML

11.029YF

Preparation use Compressor lubricant.

Company ELKE S.r.l. Via XXV Aprile 202 10042 Nichelino (To) Italia.

Tel. n. +39 011 9622412

Emergency telephone Centro Antiveleni Ospedale Niguarda Milano +39 02.66101029

Business references Domenico Amosso info@elke-ac.com

**\* 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

Chemical composition

**4 - First aid measures**

Inhalation

Contact with the skin Contact with the eyes Ingestion

The content of DMSO extract, determined with the IP 346/92 method is lower than

3% in weight.

Synthetic base oil with additives.

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.

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

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

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

**5 - Fire-fighting measures**

Fire-fighting equipment

Inappropriate extinguishers

Specific dangers in case of exposition to the chemicals, its combustion products or gases

Extinguish flames with foam, dry chemicals, CO2.

Do not use direct water jets. Use water jets just to cool down surfaces exposed to fire.

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 derivates potentially dangerous.

Specific protective equipment Wear protective overalls with self-breathing equipment. for fire-fighting personnel

**6 - Accidental release measures**

Person - related safety precautions

Environmental precautions

Decontamination procedures

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.

Avoid to disperse the product in ground, into sewers and into surface waters. If necessary inform local authorities.

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

Storage

Empty containers

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.

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.

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

Breathing equipment

Hands and skin protection

Eyes protection

Avoid the formation of hazes or aerosol and use engineering controls, ventilation or localized aspiration if necessary.

Not necessary under normal working conditions.

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.

Wear safety protective glasses where it is possible to be in contact with the product.

**9 - Physical and chemical properties**

Physical status- : Colour- :

Odour- :

pH :

Water Solubility- : Density at 15°Ckg/l :

Kinematic Viscosity at 40°CcSt : Flash Point (C.O.C.)°C :

Pour Point°C : Boiling pointhPa :

**10 - Stability and reactivity**

Liquid Colourless Typical

5,5 - 7,5 (16,7% Isopropyl alcohol/water 10/6) Partially soluble

0,990

48.2

205

-39

Decompose before boiling

Conditions to avoid

Reactivity and materials to avoid

Stability

High temperature (>150°C) can cause decomposition with development of odorous and toxic smoke.

Avoid contacts with strong acid, strong bases and oxidation agents. Avoid extreme heat and high energy sources of ignition.

Stable product in normal applications.

**11 - Toxicological information**

Chronic toxicity

Skin contact

Eyes contact

Oral toxicity

Inhalation

Exposure to oil vapour that exceeds Professional Inhalation Limits can cause respiratory system irritations.

LD50 skin (rabbit) > 2000 mg/kg (estimated). Frequent and continuous contacts could degrease skin and cause dermatitis.

It can cause light irritation.

LD50 (rats): > 2000 mg/kg (estimated). The product if ingested can irritate the digestive apparatus and induce vomiting, cause nausea and diarrhea.

Long term exposure to the product mist can cause irritation to the respiratory system.

**\* 12 - Ecological information**

Mobility Degradability Accumulation Ecotoxicity

Logarithm of the coefficient of distribution ottanolo/water is considered to be < 3. Not determined.

For this product a low potential of bioconcentration is estimated.

In compliance with EEC Regulations the product is not regarded as hazardous to the environment.

**13 - Disposal considerations**

General information

Disposal

Do not dispel the environment. Comply with the current laws.

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 dangeorus

IATA-Classe: Not dangeorus

IMDG-Classe: Not dangeorus

Transport name

PAG OIL 46 for HFO 1234YF 11.029YF

**\* 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

ATP n.790/2009; II ATP n.86/2011; III ATP n.618/2012; IV ATP n.487/2013.

**\* 16 - Other information**

Relevant H phrases

Warning

Refer also to local laws.

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. ELKE S.r.l. company does not take any responsibility resulting from any damage or injury resulting from abnormal use.