

ROTENERGY PLUS ISO 46

Product code: 2169

Previous review: 24/04/13

1. PRODUCT AND COMPANY IDENTIFICATION

<p>1.1 Product identifier</p> <p>1.2 Relevant identified uses of the substance or mixture and uses advised against</p> <p style="padding-left: 20px;">Intended use</p> <p>1.3 Details of the supplier of the safety data sheet</p> <p>1.4 Emergency Telephone Number</p>	<p>ROTENERGY PLUS ISO 46</p> <p>Lubricant oil for compressors</p> <p>FINI NUAIR S.p.A. Via Einaudi, 6 - 10070 Robassomero - Torino - Italy Sede di Bologna: Via Toscana, 21 - 40069 Zola Predosa - Bologna - Italy Tel. +39 051 6168111 - Fax +39 051 752408 www.finiccompressors.com - info@finiccompressors.it +39 (0)59 827752 8:00-12:30 – 14:00-18:00 (Italian time)</p>
---	--

2. HAZARDS IDENTIFICATION

<p>2.1 Classification of the substance or mixture</p> <p>2.2. Label elements.</p> <p>Pictograms:</p> <p>Warnings:</p> <p>Risk phrases:</p> <p>Safety phrases:</p> <p>2.3 Other hazards.</p>	<p>This product is not hazardous according to dir. 67/548/CEE e 1999/45/CE:</p> <p>This product is not labelled as hazardous according to dir. 67/548/CEE e 1999/45/CE</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>The product for its intended use presents no risk to users. However, repeated and prolonged contact, together with poor hygiene can cause skin rashes and irritation</p>
---	--

3. COMPOSITION/INFORMATION ON INGREDIENTS

<p>3.1 Substances</p> <p>3.2 Mixtures</p>	<p>Not applicable</p> <p>Base substances of preparation: Synthetic paraffins with chemical additives</p>
---	--

3.2.1

Hazardous components	Conc. %	67/548/CEE Classification	1272/2008 (CLP) Classification
Lubricating oils (petroleum) CAS 101316-72-7 CE 309-877-7 REACH-Reg N°. 01-2119489969-06-XXXX	> 97,0	None	None

See section 16 for complete map of the risk phrases
Substances without classification may have Community exposure limits in the workplace.
Unless indicated, the Registration N. is not currently available or required by REACH

Base oils used by Producer have a value in extracts in DMSO (determined with method IP 346) lower than 3% and therefore they are classified not carcinogenic according to the directive 94/69/CE note L (introduced for the first time together with the 21st adjustment to technical progress of directive 67/548/CE).

4. FIRST AID MEASURES

<p>4.1 First aid measures description.</p> <p>4.2. Acute and delayed most important symptoms.</p> <p>4.3. Statement of the need to consult immediate medical attention and special treatment needed.</p>	<p>Inhalation If exposed to high concentration of vapours and mists, take the person away from the contaminated area to a well ventilated area and send for a doctor if necessary.</p> <p>Skin Take off immediately all contaminated clothing and wash with plenty of soap and water.</p> <p>During accidents with pipes under pressure and similar, any substance can accidentally be injected into tissues under the skin, even without apparent surface damage. In that case, the injured person must be taken to hospital immediately for suitable care.</p> <p>High pressure injection injuries require prompt surgical intervention to minimise tissue damage and loss of function.</p> <p>Eyes Rinse immediately with plenty of water for a long time holding open eyelid. Seek medical advice if the pain and redness persists</p> <p>Ingestion Do not cause the vomit in order to avoid aspiration of the substance through the respiratory tract. Consult for a doctor.</p> <p>See Section 11</p> <p>See Section 4.1</p>
---	--

ROTENERGY PLUS ISO 46

Product code: 2169

Previous review: 24/04/13

5. FIRE-FIGHTING MEASURES

- 5.1 Extinguishing media: Suitable extinguishing devices: Use extinguishing devices for class B fires: carbon dioxide, dry chemical powder, foam, sprayed water, sand, earth.
Unappropriate extinguishing devices: Avoid using water jets. Only use water jets to cool surfaces of containers exposed to fire.
- 5.2 Special hazards arising from the substance or mixture. Avoid breathing combustion fumes because a fire produces: unburned hydrocarbons, carbon oxides, compounds of sulfur, phosphorous, nitrogen, zinc (See Section 10.6)
- 5.3 Advice for firefighters Complete protective clothing with breathing apparatus. Use SCBA for organic fumes and when heavy smoke occurs. Avoid accidental spillage of product on hot surfaces or electrical contacts.

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures Avoid contact with skin and eyes by wearing suitable protective clothing.
- 6.2 Environmental precautions Avoid the product being dispersed or flowing into the ground, the sewers and surface waters. If necessary inform competent local authorities.
- 6.3 Methods and material for containment and cleaning up Dyke great leakages of product. Contain the spreading of small product quantities with earth, sand or other inert absorbent material. Transfer the waste into suitable impermeable containers, able to store and transport the material collected. Dispose of it according to the legislation in force

7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling Avoid direct contact with product.
Avoid breathing aerosols or vapours of product, assuring a correct ventilation of the working place, especially if this latter is restricted.
Do not smoke Do not use open flames. Do not open container at the workplace, to prevent of vapors at high concentration
- 7.2 Conditions for safe storage, including any incompatibilities Keep the product in its original containers, stored in an environment and under conditions that assure control and containment of leakage.
Store in a cool place, far from heat sources or of possible ignition source and from direct exposure to sunrays. Avoid accumulating electrostatic charges. Keep containers tightly closed. Assure adequate ventilation of premises
- 7.3 Specific final uses None

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters Limit values for occupational exposure:
TLV/TWA mineral oil 5 mg/mc (ACGIH).

Derived No-Effect Level (DNEL):

Ingredient	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Notes
Paraffinic base oil	Worker	inhalation	Chronic, local effects	8 H	5.4 mg/m ³	(aerosol)
	Consumer	inhalation	Chronic, local effects	8 H	1.2 mg/m ³	(aerosol)

Predicted No-Effect Concentration (PNEC): Unavailable

- 8.2 Exposure controls, Personal protective equipment Avoid aerosol and mists production. It is recommended to place the machinery in airy places or remove aerosols with suitable equipments
- 8.2.1 General protective and hygienic measures It's important to maintain good personal hygiene and clean work clothes. Do not eat, drink or smoke with dirty hands of the product. Wash your hands before going to the bathroom.
Do not dry hands with dirty or greasy rags. Change clothes if they are soaked and, in any case, after work. Wash with soap and water, do not use solvents or other irritant products to prevent defatting of the skin.

ROTENERGY PLUS ISO 46

Product code: 2169

Previous review: 24/04/13

8.2.2 Respiratory protection	If the operational mode and other means to limit worker exposure are not adequate – in respect of the exposure limits if specified in heading 8.0 – other measures to protect the human breathing apparatus are needed: gas masks with organic vapour cartridge and for dusts/mists (e.g. mask with charcoal filters).
8.2.3 Hand protection	Wear work gloves (e.g. in neoprene, nitrile or PVC), preferably plush-lined, resistant to mineral oils or solvents. Gloves must be replaced at first signs of wear. Put on gloves after washing hands carefully. When contact is not prolonged, the use of barrier creams can be a useful protection instrument. The choice of protective gloves also depends on conditions and must follow manufacturer indications. For further information, refer to UNI EN 374-1, 374-2, 374-3 norms
8.2.4 Eye protection	Wear safety goggles when contact with the product is possible. For further information, refer to UNI EN 166 norm
8.2.5 Skin protection	Wear overalls or aprons made of a suitable material; change immediately contaminated clothing and wash it carefully before using it again.

For further information refer to UNI EN 465, 466, 467 norms

9. CHEMICAL – PHYSICAL PROPERTIES

9.1 Information on basic physical and chemical properties	
State at 20°C	Fluid
Colour	red
Odour	Characteristic
Odour threshold	Not determinable
pH	Not determinable
Pour Point (ASTM D 97)	No data available
Initial boiling point	No data available
Flash Point (ASTM D 92)	> 210 °C
Evaporation rate	No data available
Flammability	No data available
Flammability upper value	No data available
Flammability lower value	No data available
Vapour pressure	Not applicable
Vapour density	Not applicable
Density (15°) (ASTM D 1298)	≈ 0.830 g/cm ³
Solubility (water)	insoluble
Partition coefficient n octanol / water	No data available
Auto-ignition temperature	Uninflammable
Decomposition temperature	No data available
Kinematic Viscosity @40°C	≈ 41.4 – 50.6 cSt
Explosive properties	No
Oxidizing properties	No
9.2 Other information	No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity	Avoid contact with strong acids and bases and oxidising chemicals
10.2 Stability	The compound is stable at normal conditions
10.3 Possibility of hazardous reactions	No hazardous reaction known
10.4 Conditions to avoid	Avoid contact with heat, sparks, flames, hot surfaces
10.5 Incompatible materials	strong acids and bases and oxidising chemicals
10.6 Hazardous decomposition products	carbon oxides, sulfur, phosphorous, nitrogen, zinc oxides

11. TOXICOLOGICAL INFORMATION

ROTENERGY PLUS ISO 46
Product code: 2169
Previous review: 24/04/13

There is no toxicological data on the mixture. The toxicological information listed below is related to the most abundant substances in the mixture. According to the data of substances and similar components can be deduced that: exposure to a high concentration of vapour or mist may be irritating. This product if swallowed, may cause irritation to gastrointestinal tissues, nausea, vomiting, diarrhea. Frequent and prolonged contacts may degrease and irritate the skin, also causing dermatitis. General advise: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed it may cause slight irritation.

11.1 Information on toxicological effects

General data: The formulation has been classified using the conventional method by Directive 1999/45/EC. The available health / ecological information for the substances listed in section 3 and below.

Please note that the information presented in this section are related to the category of refined lubricating oil (IP 346 <3%)

Acute toxicity:

Hazardous component	Parameter	Value	Application rules	Exposition time	Species	Method
mineral oil (IP 346 < 3%)	DL50	> 5000 mg/kg	Oral		Rat (M/F)	OECD Guideline 401
	CL50	> 5.53 mg/l	Inhalation	4 h	Rat (M/F)	aerosol OECD Guideline 403
	DL50	> 5000 mg/kg			Rabbit	OECD Guideline 402

Corrosion/skin irritation:

Hazardous component	Outcome	Exposure Time	Species	Method
mineral oil (IP 346 < 3%)	Irritating Erythema average score: 1/8 Edema average score: 0/8	24h 24h	Rabbit	Not following OECD Guideline 404, but adequate
	Irritating Erythema average score: 0.17/8 Edema average score: 0.25/8	24h 24h	Rabbit	equivalent to OECD Guideline 404

Serious eye damage / eye irritation:

Hazardous component	Outcome	Exposure Time	Species	Method
mineral oil (IP 346 < 3%)	Not irritating Cornea average score: 0/8 (48h) Iris average score: 0/8 (48h) Conjunctiva average score: 0.33/8 (48h)	24/48/72	Rabbit	OECD Guideline 405

Skin Sensitization:

Hazardous component	Outcome	Exposure Time	Species	Method
mineral oil (IP 346 < 3%)	Not sensitizing (0/10)	-	Guinea Pig	Buehler test Guideline OECD 406

Germ cell mutagenicity:

Hazardous component	Outcome	Study type / Assumption pathway	Metabolic activation / Exposure Time	Species	Method
mineral oil (IP 346 < 3%)	Negative	Ames's test Doses: 50 µl/plate	With activation	Salmonella thyphimurium TA 98	Equivalent to OECD Guideline 471
	Negative	In vivo		Mouse	Equivalent to OECD guideline 474

Carcinogenicity: refined base mineral oils (IP 346 < 3%) did not show any evidence of carcinogenetic activity in dermal carcinogenetic samples.

Hazardous component	Outcome	Application rules	Exposure Time	Species	Method
mineral oil (IP 346 < 3%)	not carcinogenic (no effect detected)	Dermal	Exposition 78 weeks Doses: 0.2 e 0.25 ml	Mouse (F)	Equivalent to OECD Guideline 451

Reproductive toxicity: refined base mineral oils (IP 346 < 3%) did not show any evidence on reproductive capacity. For this reason they're not classified for this hazard.

Hazardous component	Outcome	Application rules	Treatment	Species	Method
mineral oil (IP 346 < 3%)	NOAEL (G) > 1000 mg/kg/g (M/F) NOAEL (N) > 1000 mg/kg/g (M/F)	Screening, Oral (gavage)	Doses: 1000 mg/kg/g	Rat (m/f)	OECD Guideline 421

ROTENERGY PLUS ISO 46

Product code: 2169

Previous review: 24/04/13

Developmental toxicity/teratogenicity: For refined mineral base oils (IP 346 < 3%), studies on human growth hasn't shown any teratogenic effect. For this reason no hazard classification in developmental toxicity is needed.

Hazardous component	Outcome	Application rules	Treatment	Species	Method
mineral oil (IP 346 < 3%)	LOAEL (maternal toxicity): 125 mg/kg/g (irritation) NOAEC (toxicity on growth): 2000 mg/kg/g (no effect)	Dermal	Doses: 0, 125, 500, 2000 mg/kg/g	Rat	Equivalent to OECD Guideline 414

Specific Target Organ Toxicity (STOT) single exposure: No data available

Specific Target Organ Toxicity (STOT) repeated exposure:

Refined lubricating oil (IP 346 < 3%) were not classified in accordance with the regulations on dangerous substances.

Hazardous component	Outcome	Application rules	Exposure time/ Treatment frequency	Species	Method
mineral oil (IP 346 < 3%)	NOAEL (not identified) LOAEL : 125 mg/kg/g	Oral	Subchronical exposure (90 days) 125 – 500 mg/kg/g (gavage)	Rat (M)	OECD Guideline 408
	NOAEL (M/F): >980 mg/m3 NOEL: ca 220 mg/m3l	Inhalation (aerosol)	(28 gg)	Rat (M/F)	OECD Guideline 412
	NOAEL (M/F) > 2000mg/kg	Dermal	Exposure: subchronical	Rat (M/F)	OECD Guideline 411

12. ECOLOGICAL INFORMATION

Use in accordance with good practice's standards and avoid littering. Prevent dispersions on soil, water surface and drainage systems (see also sections 6, 7, 13, 14 and 15).

Ecological general data: The formulation has been classified using the conventional method by Directive 1999/45/EC. There are no data available on the mixture; the available health / ecological information for the substances listed in section 3 and below. Do not discharge in sewers, underground passages or waterways

12.1. Toxicity

Hazardous component	Value type	Value	Acute Toxicity Study	Exposure Time	Species	Method
mineral oil (IP 346 < 3%)	EL50 NOEL	> 10000 mg/l (WAF) > 10000 mg/l (WAF)	Short term	48h: 48h:	Daphnia magna	OECD Guideline 202
	NOEL	10 mg/l	Long term	21 days	Daphnia magna	OECD 211
	NOEL	> 100 mg/l (WAF)	Short term	72h	Algae: Raphidocelis subcapitata	OECD Guideline 201
	LL50 NOEL	> 100 mg/l > 100 mg/l	Short term	96h: 96ore:	Fish: Pimephales Promelas	-
	NOEL	> 1000 mg/l	Long term	14 days:	Fish: Oncorhynchus mykiss	QSAR

12.2 Persistence and degradability No data available Though not classified as dangerous for the environment, it thinks that the product is not readily biodegradable.

Hazardous component	Application rules	Degradability	Method

12.3 Bioaccumulative potential / 12.4 Mobility in soil No data available.

Hazardous component	LogKow	Bioconcentration Factor (BCF)	Exposure Time	Method

12.5 Results of PBT and vPvT assessment Upon the available informations, the mixture's components, are not PBT and vPvB

12.6 Other adverse effects None

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product: Dispose of exhausted products according to local or national legislations.
Contaminated containers: according to local or national legislations.

14. TRANSPORT INFORMATION

ROTENERGY PLUS ISO 46

Product code: 2169

Previous review: 24/04/13

Land transport (ADR/RID) Not classified as hazardous
Sea transport (cod. IMDG) Not classified as hazardous
Air transport (IATA/ICAO) Not classified as hazardous

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Dir 67/548/CEE (Classification, Packaging and Labelling of dangerous goods) and all following updates. Dir 99/45/CE (Classification, Packaging and Labelling of dangerous goods) and all following updates. Reg. n° 1907/2006/CE (REACH) Reg. n° 1272/2008 (CLP) Reg. n° 790/2009/CE (amending, for the purposes of adaptation to technical progress and scientific, ATP of reg n° 1272/2008/CE) and following updates and Dir 2009/161/UE. D.Lgs 81/2008. Reg n° 648/2004/CE related to detergents and following updates. Unavailable

15.2 Chemical safety assessment

16. OTHER INFORMATION

General indication

Do not use the product for uses that are not indicated. In this case, the user could be subject to unforeseen risks. The information has been drafted to the best of our knowledge. It is for information purposes and is not a guarantee. The product is used under User control and it is their responsibility to adapt to the correct usage conditions indicated on the SDS and to adapt to suitable industrial hygiene practice. This document does not replace the chemical risk analysis which is the employer's complete responsibility.

Document references

Sheet provided according to Regulation 453/201/UE - Annex I for the preparation of Material Safety Data Sheet.

Review.

Sections modified from latest version: all

R risk phrases

R41 Risk of serious damage to eyes
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

H Hazard phrases

H318 Causes serious eye damage
H411 Toxic to aquatic life with long lasting effects.

Acronyms, symbols and abbreviations

ADR Agreement concerning the international carriage of Dangerous goods by Road
ACGIH American Conference of Governmental Industrial Hygienists
CLP Classification, Labeling & Packaging
DNEL Derived No Effect Level
IATA International Air Transport Association
ICAO International Civil Aviation Organisation,
IMDG International Maritime Dangerous Goods
PBT Persistent, bioaccumulative and toxic
PNEC Predicted No Effect Concentration
REACH Registration, Evaluation and Authorization of Chemicals
RID Règlement concernant le transport International ferroviaire des marchandises Dangereuses
TLV Threshold Limit Value
TWA Time Weighted Average
UE Unione Europea
vPvB very Persistent very Bioaccumulative