

Safety Data Sheet

Refrigeration Lubricant CO2 - PAG



Safety Data Sheet dated 8/4/2022, version 6.0
This version cancels and substitutes any previous version

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Mixture identification:

Trade name: Refrigeration Lubricant CO2 - PAG

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use:

PAG lubricant for A / C systems

1.3. Details of the supplier of the safety data sheet

Company:

ERRECOM SPA

Via Industriale, 14

Corzano (BS) Italy

Tel. +39 030/9719096

Competent person responsible for the safety data sheet:

lab@errecom.it


1.4. Emergency telephone number

+39 02-6610-1029 Poison Control Center Niguarda Ca' Granda - Milano - ITALY

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

 Warning, Acute Tox. 4, Harmful if swallowed.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Warning

Hazard statements:

H302 Harmful if swallowed.

Precautionary statements:

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Special Provisions:

None

Contains

tetrahydrofurfuryl alcohol, propoxylated, methyl capped

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration \geq 0.1%

Other Hazards:

No other hazards

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SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
>= 90%	tetrahydrofurfuryl alcohol, propoxylated, methyl capped	CAS: 353291-27-7	3.1/4/Oral Acute Tox. 4 H302

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

In case of adverse health effects seek medical advice.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Rinse mouth with water, then drink one or two glasses of water.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray jet, alcohol resistant foam, extinguishing powder, carbon dioxide.

Extinguishing media which must not be used for safety reasons:

High pressure water jet.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Hazardous combustion products:

May include, and are not limited to: oxides of carbon.

Toxic fumes.

5.3. Advice for firefighters

Use suitable breathing apparatus.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non emergency personnel:

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- Wear personal protection equipment.
- Remove persons to safety.
- See protective measures under point 7 and 8.
- For emergency responders:
 - Wear personal protection equipment.
- 6.2. Environmental precautions
 - Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
 - Retain contaminated washing water and dispose it.
 - In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
 - Suitable material for taking up: absorbing material, organic, sand
- 6.3. Methods and material for containment and cleaning up
 - Wash with plenty of water.
- 6.4. Reference to other sections
 - See also section 8 and 13

SECTION 7: Handling and storage

- 7.1. Precautions for safe handling
 - Avoid contact with skin and eyes, inhalation of vapours and mists.
 - Don't use empty container before they have been cleaned.
 - Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
 - Advice on general occupational hygiene:
 - Contaminated clothing should be changed before entering eating areas.
 - Do not eat or drink while working.
 - See also section 8 for recommended protective equipment.
- 7.2. Conditions for safe storage, including any incompatibilities
 - Keep container tightly closed. To maintain product quality, do not store in heat or direct sunlight. Keep in a dry, cool and well-ventilated place.
 - Store only in the original container.
 - Keep away from food, drink and feed.
 - Incompatible materials:
 - See subsection 10.5
 - Keep away from heat.
 - Protect from direct sunlight.
 - Do not store together with reductants.
 - Do not store together with oxidants.
 - Instructions as regards storage premises:
 - Adequately ventilated premises.
- 7.3. Specific end use(s)
 - Information not available.

SECTION 8: Exposure controls/personal protection

- 8.1. Control parameters
 - No occupational exposure limit available
 - DNEL Exposure Limit Values
 - N.A.
 - PNEC Exposure Limit Values
 - N.A.
- 8.2. Exposure controls
 - Eye protection:
 - Tightly fitting safety goggles.
 - Protection for skin:
 - Full protection suit.

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Protection for hands:

Suitable material:

NBR (nitrile rubber).

PVC (polyvinyl chloride).

Material thickness: minimum 0.12 mm.

Break through time : > 480 min

Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Respiratory protection:

In the case of vapour formation use a respirator with an approved filter.

Mask with filter "A", brown colour

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Physical state:	Liquid	--	--
Colour:	Yellow	--	--
Odour:	characteristic	--	--
Melting point/freezing point:	N.A.	--	--
Boiling point or initial boiling point and boiling range:	N.A.	--	--
Flammability:	N.A.	--	--
Lower and upper explosion limit:	N.A.	--	--
Flash point:	>200 ° C	ASTM-D 93	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	N.A.	--	--
pH:	N.A.	--	--
Kinematic viscosity:	N.A.	--	--
Solubility in water:	insoluble	--	--
Solubility in oil:	N.A.	--	--
Partition coefficient n-octanol/water (log value):	N.A.	--	--
Vapour pressure:	N.A.	--	--
Density and/or relative density:	0.993 - 1.003 g/mL (+20°C / +68°F)	ASTM-D4052	--
Relative vapour density:	N.A.	--	--

Particle characteristics:

Particle size:	N.A.	--	--
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9.2. Other information

Properties	Value	Method:	Notes:
Viscosity:	46-100 mm ² /s	ASTM-D445	--

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	(+40°C / +104°F)		
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SECTION 10: Stability and reactivity

- 10.1. Reactivity
Stable under normal conditions
- 10.2. Chemical stability
Stable under normal conditions
- 10.3. Possibility of hazardous reactions
None
- 10.4. Conditions to avoid
Stable under normal conditions.
- 10.5. Incompatible materials
Strong oxidizing agents.
Strong acids.
Reducing agents
- 10.6. Hazardous decomposition products
No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicological information of the product:

- a) acute toxicity
The product is classified: Acute Tox. 4 H302
Test: LD50 - Route: Oral > 300 mg/kg - Notes: > 300 - <= 2000 mg/kg
- b) skin corrosion/irritation
Not classified
Based on available data, the classification criteria are not met
- c) serious eye damage/irritation
Not classified
Based on available data, the classification criteria are not met
- d) respiratory or skin sensitisation
Not classified
Based on available data, the classification criteria are not met
- e) germ cell mutagenicity
Not classified
Based on available data, the classification criteria are not met
- f) carcinogenicity
Not classified
Based on available data, the classification criteria are not met
- g) reproductive toxicity
Not classified
Based on available data, the classification criteria are not met
- h) STOT-single exposure
Not classified
Based on available data, the classification criteria are not met
- i) STOT-repeated exposure
Not classified
Based on available data, the classification criteria are not met
- j) aspiration hazard
Not classified
Based on available data, the classification criteria are not met

Toxicological information of the main substances found in the product:

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- N.A.
- 11.2. Information on other hazards
Endocrine disrupting properties:
No endocrine disruptor substances present in concentration $\geq 0.1\%$

SECTION 12: Ecological information

- 12.1. Toxicity
Adopt good working practices, so that the product is not released into the environment.
Not classified for environmental hazards
Based on available data, the classification criteria are not met
- 12.2. Persistence and degradability
N.A.
- 12.3. Bioaccumulative potential
N.A.
- 12.4. Mobility in soil
N.A.
- 12.5. Results of PBT and vPvB assessment
vPvB Substances: None - PBT Substances: None
- 12.6. Endocrine disrupting properties
No endocrine disruptor substances present in concentration $\geq 0.1\%$
- 12.7. Other adverse effects
None

SECTION 13: Disposal considerations

- 13.1. Waste treatment methods
Recover if possible. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

- 14.1. UN number or ID number
Not classified as dangerous in the meaning of transport regulations.
- 14.2. UN proper shipping name
N.A.
- 14.3. Transport hazard class(es)
N.A.
- 14.4. Packing group
N.A.
- 14.5. Environmental hazards
IMDG-Marine pollutant: No
- 14.6. Special precautions for user
N.A.
- 14.7. Maritime transport in bulk according to IMO instruments
N.A.

SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
 Regulation (EU) n. 2020/878
 Regulation (EU) n. 286/2011 (ATP 2 CLP)
 Regulation (EU) n. 618/2012 (ATP 3 CLP)
 Regulation (EU) n. 487/2013 (ATP 4 CLP)
 Regulation (EU) n. 944/2013 (ATP 5 CLP)
 Regulation (EU) n. 605/2014 (ATP 6 CLP)
 Regulation (EU) n. 2015/1221 (ATP 7 CLP)
 Regulation (EU) n. 2016/918 (ATP 8 CLP)
 Regulation (EU) n. 2016/1179 (ATP 9 CLP)
 Regulation (EU) n. 2017/776 (ATP 10 CLP)
 Regulation (EU) n. 2018/669 (ATP 11 CLP)
 Regulation (EU) n. 2018/1480 (ATP 13 CLP)
 Regulation (EU) n. 2019/521 (ATP 12 CLP)
 Regulation (EU) n. 2020/217 (ATP 14 CLP)
 Regulation (EU) n. 2020/1182 (ATP 15 CLP)
 Regulation (EU) n. 2021/643 (ATP 16 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restrictions related to the substances contained:

No restriction.

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)

Regulation (EC) nr 648/2004 (detergents).

Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

None

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Full text of phrases referred to in Section 3:

H302 Harmful if swallowed.

Hazard class and hazard category	Code	Description
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4

Paragraphs modified from the previous revision:

SECTION 6: Accidental release measures

SECTION 9: Physical and chemical properties

SECTION 10: Stability and reactivity

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr.	Classification procedure
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1272/2008	
Acute Tox. 4, H302	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,
Commission of the European Communities
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van
Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.