

Material Safety Data Sheet
According to CE 1907/2006/CE Regulation, attachment 31

Substance: Compressor ester oil P-17-S

Stand: 07.01.2015 Rev.-Nr. 02

*** 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

1.1 Product identifier

Trade name: Part. No. 4503376 / P-17-S-0,25 and 4503384 P-17-S-1 / Compressor ester oil (P-17-S-200)

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

No further relevant information available.

Application of the substance / the preparation:

For industrial use only

Lubricant

Compressor lubricant

1.3 Details of the supplier of the safety data sheet

REFCO Manufacturing Ltd. Industriestrasse 11 | 6285 Hitzkirch Switzerland

Tel.: +41 41 919 72 82 | Fax: +41 41 919 72 83

E-Mail: info@refco.ch

1.4 Emergency telephone number

Swiss toxicologically information centre Zurich

Telephone number in urgent matters: 145 or +41 44 251 51 51

Not urgent matters: +41 44 251 66 66

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

The product is not classified according to the CLP regulation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC: Not applicable.

Information concerning particular hazards for human and environment:

The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

2.2 Label elements

Labelling according to EU guidelines:

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous materials (German GefStoffV).

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

*** 3. COMPOSITION/INFORMATION ON INGREDIENTS**

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3.1 Substances Description: Mixture of esters and additives Declarable, or hazardous components: CAS-no. Void Additional information: For the wording of the listed risk phrases refer to section 16. Not mentioned CAS-, EINECS- or registration numbers are to be regarded as Proprietary/Confidential.
4. FIRST AID MEASURES 4.1 Description of first aid measures General information: No special measures required. After inhalation: Supply fresh air; consult doctor in case of complaints. After skin contact: Generally the product does not irritate the skin. After eye contact: Rinse opened eye for several minutes under running water. After swallowing: If symptoms persist consult doctor. 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available. 4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.
* 5. FIREFIGHTING MEASURES 5.1 Extinguishing media Suitable extinguishing agents: CO ₂ , powder or water spray. Fight larger fires with water spray. For safety reasons unsuitable extinguishing agents: Water with full jet 5.2 Special hazards arising from the substance or mixture No further relevant information available. 5.3 Advice for fire-fighters Protective equipment: No special measures required. Additional information: Cool endangered receptacles with water spray.
6. ACCIDENTAL RELEASE MEASURES (continue) 6.1 Personal precautions, protective equipment and emergency procedures Not required. 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water. 6.3 Methods and material for containment and cleaning up Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). 6.4 Reference to other sections No dangerous substances are released. See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.
7. HANDLING AND STORAGE 7.1 Precautions for safe handling

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The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).

Observe the general safety regulations when handling chemicals.

Information about fire - and explosion protection: No special measures required.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: Store only in the original receptacle.

Information about storage in one common storage facility: Store away from oxidizing agents.

Further information about storage conditions:

Protect from heat and direct sunlight.

Optimal storage temperature between 0 °C and 40 °C.

Duration of storage: In original container, at least 3 years.

Storage class: 10

7.3 Specific end use(s)

No further relevant information available.

* 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

Ingredients with limit values at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Respiratory protection: Not required.

Material of gloves



The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the resultant standard EN 374. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

The break through, among others, depending on material density and the type of glove and therefore must be determined in each individual case. Gloves must be inspected prior to use. Replace when worn! Impervious gloves: nitrile rubber, minimum thickness of 0.3 mm.

Penetration time of glove material

The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION (continue)

8.2 Exposure controls (continue)

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Eye protection:



Eye protector with side protection (framed eyeglasses) EN 166.

Body protection:



Protective work clothing

* 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties / General Information

Appearance / Form	Fluid
Colour	Light yellow
Odour	Ester-like
Odour threshold	-
pH	-
Melting point / Melting range	Not applicable
Boiling point / Boiling range	> 300 °C (DIN 51751)
Drip point	Not applicable
Pour point	-39°C. (ISO 3016)
Flash point	270°C (ISO 2592)
Ignition temperature	Not applicable
Evaporation rate	-
Flammability (solid, gas)	-
Upper/lower flammability or explosive limits	-
Vapour pressure	-
Vapour density at 20°C	0.95 g/cm³ (DIN 51757)
Density	-
Solubility in / Miscibility with water:	Not miscible or difficult to mix
Partition coefficient: n-octanol/water (log POW)	-
Auto-ignition temperature	Product is not selfigniting
Decomposition temperature	-
Viscosity Kinematic at 100°C:	8.6 mm²/s (ISO 3104) 46 mm²/s @ 40 °C (ISO 3104)
Explosive properties	Product does not present an explosion hazard
Oxidising properties	-

9. Other information (continue)

9.2 Other information

Suitability materials	
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VOCV (CH)	0 %
Other information	safety relevant data, which has to be considered as product specifications

10. STABILITY AND REACTIVITY

10.1 Reactivity

None known if used as directed.

10.2 Chemical stability

Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions

Reacts with strong oxidizing agents.

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials

No further relevant information available.

10.6 Hazardous decomposition products

Carbon monoxide and carbon dioxide

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

LD/LC50 values relevant for classification:

> 2000 - < 5000 mg / kg (oral, rat)

> 5,100 mg/m³ 4h (inhalation, rat)

Primary irritant effect:

on the skin: No irritant effect.

on the eye: No irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

* 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability

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<p>Easily biodegradable</p> <p>12.3 Bio accumulative potential No further relevant information available.</p> <p>12.4 Mobility in soil No further relevant information available.</p> <p>Additional ecological information / General notes: Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water Do not allow product to reach ground water, water course or sewage system.</p> <p>12.5 Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable.</p> <p>12.6 Other adverse effects No further relevant information available.</p>
<p>13. DISPOSAL CONSIDERATIONS</p> <p>13.1 Waste treatment methods Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system.</p> <p>European waste catalogue 13 01 11* synthetic hydraulic oils</p> <p>Uncleaned packaging: Recommendation: Disposal must be made according to official regulations.</p>
<p>14. TRANSPORT INFORMATION</p> <p>14.1 UN-Number ADR, ADN, IMDG, IATA: Void</p> <p>14.2 UN proper shipping name: ADR, ADN, IMDG, IATA: Void</p> <p>14.3 Transport hazard class(es) ADR, ADN, IMDG, IATA Class Void</p> <p>14.4 Packing Group ADR, IMDG, IATA: Void</p> <p>14.5 Environmental hazards Marine pollutant: No</p>
<p>14. TRANSPORT INFORMATION (continue)</p> <p>14.6 Special precautions for users Not applicable</p> <p>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable</p>

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Transport/Additional information:

Not dangerous according to the above specifications.

UN "Model Regulation":

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15. REGULATORY INFORMATION

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

National regulations:

No further regulations.

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57

This preparation does not contain any SVHC ("Substances of Very High Concern")

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Regulations / approvals / listings:

Information on REACH registration numbers in section 3:

In case of lack of REACH registration numbers on mentioned hazardous substances at the end of 2010, then these numbers will be known and indicated only in section 3 within its tonnage band for registration, after the end of 2013, respectively by the end of 2018, or are exempt from the REACH regulation (e.g. polymers).

RoHS:

The product is compliant with European Directives 2011/65/EC, 2002/95/EC, WEEE 2002/96/EC, 2003/11/EC, 2005/53/EC and RoHS.

The following substances ARE NOT contained:

Pentabromodiphenylether, Octabromodiphenylether, polybrominated diphenylether (PDBE) and / or polybrominated biphenyls (PBB), lead or it's compounds, cadmium or it's compounds, mercury or it's compounds, chromium Cr⁶⁺-compounds.

Department issuing MSDS: Product Safety Department

Contact: Mr Weber

Editor's notice:

The above mentioned data correspond to our present state of knowledge and experience.

The safety data sheet serves as description of the products in regard to necessary safety measures.

The indications have not the meaning of guarantees on properties.

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Abbreviations and acronyms:

RoHS: Restriction of Hazardous Substances

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

ISO: International Organization for Standardization

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

SVHC: Substance of Very High Concern (REACH)

CLP: Classification, Labeling and Packaging (European GHS)

PBT: Persistent, Bioaccumulative and Toxic chemicals

vPvB: very Persistent and very Bioaccumulative chemicals

*** Data compared to the previous version altered.**

The asterisk (*) on the left side indicate the respective changes from the previous version.

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