

KAESER KOMPRESSOREN	SAFETY DATA SHEET 1907/2006/EC				KAESER OMEGA FLUID M 220 883816.0, 883816.00010, 9.3027.0
	Created TDok-Plo Modified: Pa/UT	Created on: 07.97 Modified: 18.07.2014	Checked by: QESM V06	Released by: QESM	Page 1 of 10

1. Identity of substance, preparation, and supplying company

1.1 Product trade name: OMEGA FLUID-M 220 rotary blower oil 883816.0, 883816.00010, 9.3027.0

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

Product use: Rotary blower oil

Uses of the substance or mixture advised against: Without prior consultation with the supplier, this product may not be used for any other applications other than those stipulated in Section 1.

1.3 Supplier: KAESER Kompressoren SE Tel. +49/+9561/640-0
Carl-Kaeser-Straße 26
DE-96450 Coburg
E-Mail: sdb.de@kaeser.com
Technical information: Tel. +49/+9561/640-0

Emergency telephone number: Poisons Information Centre Göttingen Tel. +49/+551/19240

2. Potential Hazards

2.1 Classification of the substance or mixture

Directive 1999/45/EC	
Hazard characteristics	R-phrases
Not classified as dangerous under EC criteria.	Not required

2.2 Label elements

EC hazard symbols: No hazard symbol required.

EC Classification: Not classified as dangerous under EC criteria.

R-phrases: Not classified.

S phrases: Not classified.

2.3 Other hazards

Dangers to human health: Not expected to be a health hazard when used under normal conditions. Prolonged or repeated skin contact without proper washing can clog pores and cause complaints such as acne and folliculitis. Used oil can contain damaging contaminants.

Risks to safety: Not classified as combustible; but flammable.

Environmental hazards: Not classified as environmentally harmful.

3. Composition/Information on Ingredients

3.1 Substances

Product name: Not applicable

3.2 Mixtures

Description of the preparation: Highly refined mineral oils and additives

Additional information: According to IP 346, the highly refined mineral oil contains a dimethyl sulphoxide (DMSO) extractable part of less than 3% (W/W).

This mixture does not contain REACh-registered substances classified as PBT or vPvB.

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4. First-aid measures

4.1 Description of first-aid measures

General information:

No danger expected under normal conditions.

Inhalation:

No treatment needed under normal conditions of use. Seek medical advice in case of symptoms.

Skin contact:

Remove contaminated clothing. Rinse exposed skin with water and wash with soap if available. Seek medical advice for persistent irritation.

Eye contact:

Rinse thoroughly with water. Seek medical advice for persistent irritation.

Ingestion:

No treatment necessary unless a large quantity is swallowed. Seek medical advice in such a case.

Self-protection of the first responder:

First responders must wear suitable personal protective equipment as appropriate for the incident, the injury, and the environment.

4.2 Most important symptoms and effects, both acute and delayed

Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Swallowing may cause nausea, vomiting and/or diarrhoea.

4.3 Indication of immediate medical attention or special treatment needed

Treat symptomatically.

5. Fire-fighting Measures

Allow only rescue services to approach a fire.

5.1 Extinguishing media

Foam, water spray or water mist. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing agents:

Do not use a strong water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products that may develop: A complex mixture of airborne solid and liquid particulates and gases, including carbon monoxide and unidentified organic and inorganic compounds.

5.3 Advice for firefighters

Fire-fighting personnel must wear suitable personal protective equipment, including chemical-resistant protective gloves. If large-surface contact with spilled material may occur, a chemical protection suit is mandatory. In the vicinity of fire in small enclosed spaces, a self-contained breathing apparatus is mandatory. Select fire-fighting protective clothing complying with the relevant standards (EN 469 in Europe, for example).

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6. Accidental Release Measures

Avoid contact with spilled product. See Section 8 for personal protection equipment. Observe all relevant national and international regulations.

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 Personnel without emergency response training

Avoid contact with eyes and skin.

6.1.2 Trained emergency personnel

Avoid contact with eyes and skin.

6.2 Environmental precautions

Apply suitable containment measures to prevent environmental pollution. Entry into sewage, rivers or surface water drains can be prevented by damming with sand, earth or another suitable substance.

6.3 Methods and materials for containment and clean-up

Danger of slipping in spilled oil. Clean up immediately to avoid accidents. Contain spillage by damming with sand, earth or another suitable substance. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose as per regulations.

Further instructions:

Inform the authorities of a large spill that cannot be contained.

6.4 Reference to other sections

See Section 8 of this safety data sheet for further information regarding the selection of personal protection equipment. See Section 13 of this safety data sheet for information regarding appropriate disposal.

7. Handling and Storage

General safety precautions:

Use ventilating equipment if there is a danger of inhaling vapour, mist or aerosol. The information provided with this safety data sheet should be used as the basis for a risk assessment of the local conditions in order to determine suitable measures for the handling, storage, and disposal of this product.

7.1 Precautions for safe handling

Avoid prolonged or repeated contact with skin. Avoid inhaling vapours and/or mist. Wear safety shoes when handling barrels of the product and use suitable handling devices. Correctly dispose of any contaminated cleaning cloths or utensils to avoid the possibility of fire. Keep containers closed and store in a cool, well ventilated place. Use properly labelled and closable containers.

Decanting

This material is a potential static accumulator. During mass transport, always ensure proper earthing and correct potential equalisation.

7.2 Conditions for safe storage, including any incompatibilities

Section 15 provides additional information regarding the legally binding packing and storage instructions for this product.

Recommended materials:

Use soft steel or high density polyethylene (HDPE) for containers or container linings.

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Unsuitable materials:

PVC

7.3 Specific applications

Not applicable.

Additional information:

Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

Storage class according to TRGS 510: 10

Fire hazard classification: B.

Shelf-life:

Lubricants should be stored under dry conditions and at a constant temperature. If the date on the canister/drum is exceeded this does not mean that the product cannot be used. However, its suitability must be checked. For questions in this context, please contact your supplier.

8. Exposure control and personal protection

If the American Conference of Governmental Industrial Hygienists (ACGIH) values are given in this document, they are provided for information only.

8.1 Parameters to be monitored

Occupational exposure limits

Product	Source	Type	Ppm	mg/m ³	Remarks
Mineral oil mist	ACGIH	TWA [inhalable fraction]		5	

Biological exposition index (BEI): No data available

PNEC-related information: No data available

Monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an occupational exposure level and the adequacy of exposure controls. Biological monitoring may be also suitable for some substances. Validated methods of exposure measurement are to be performed by a qualified person. The samples must be analysed in an approved laboratory. The following lists some sources for recommended procedures regarding the monitoring of concentrations in air; if required, contact the supplier for further information. National procedures may be applicable.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods

<http://www.cdc.gov/niosh/>

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods

<http://www.osha.gov/>


Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances

<http://www.hse.gov.uk/>

Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung (IFA), Germany

<http://www.dguv.de/inhalt/index.jsp>

L'Institut National de Recherche et de Sécurité, (INRS), France <http://www.inrs.fr/accueil>

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8.2 Exposure controls

General information

The scope of protection and type of necessary checks varies depending on the potential exposure conditions. Workplace monitoring should be selected on the basis of a risk assessment of local conditions. Appropriate measures include: Adequate ventilation to control concentration in the air. High concentration can occur if the product is heated or sprayed or forms a mist.

Determine procedures for safe handling and maintaining protective measures. Train your employees in theory and practice regarding the hazards and protective measures as they are relevant for any personnel routinely working with this product.

Ensure appropriate selection, test and maintenance of equipment used in protective measures, for example, personal protective equipment, local exhaust air system. Shut all systems down before opening or servicing the equipment. Keep drains tightly sealed until ready for disposal or later recycling. Always comply with proven procedures for personal hygiene, such as washing hands after handling the material and before eating, drinking and/or smoking. Regularly wash or clean work clothing and protective equipment to remove contaminants. Dispose of contaminated clothing and shoes that cannot be cleaned. Practice good housekeeping.

Exposure limitation and monitoring in the workplace

Personal protective equipment

This information is provided in compliance with the PPE Directive (Directive 89/686/EEC) and the standards of the European Committee for Standardization (CEN). Personal protection equipment (PPE) should meet national Standards.

Eye protection

Wear safety glasses or full face shield if splashes are likely to occur. Pursuant to EU Standard EN166.

Hand protection

Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of gloves depend their use, such as frequency and duration of contact, and the chemical resistance of the material. Replace contaminated gloves. A barrier cream should also be used. Wear safety gloves on clean hands. Hands should be washed and dried thoroughly after gloves have been worn. It is recommended to use a non-perfumed moisturising cream.

For continuous exposure, we recommend gloves with a penetration time of > 240 minutes, ideally > 480 minutes, if available. As a protection from short-term exposure, we recommend the same, although it is possible that gloves with this protection class may not be available. In this case, gloves with a reduced penetration time will be sufficient, if all care and replacement instructions are complied with. The thickness of the gloves does not necessarily provide information regarding their resistance against a specific chemical, because such depends on the exact composition of the glove material.

Body protection

Skin protection exceeding normal work wear is usually not required.

Respiratory protection

No protection is required under normal conditions. In accordance with good industrial hygiene practices, precautions should be taken to avoid inhalation of the material. If technical measures are unable to keep the pollution concentrations below critical limits, select suitable respiratory protection, taking into account the specific work conditions and applicable legal provisions. Consult the suppliers of respiratory protection devices. Where normal filtration is suitable, use a combination of filter and face mask. Use a combination filter for particles, gases and vapours (boiling point >65°C, 149°F according to EN 387).

Thermal hazards:

Not applicable.

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Environmental exposure controls

Minimise release to the environment. Environmental assessment is necessary to ensure local regulations are upheld. See Section 6 for further information regarding actions to be taken in the event of unintended exposure.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Yellowish. Liquid at room temperature.
Odour:	Slightly carbonic
Odour threshold:	No data available
pH value:	Not applicable
Initial boiling point and boiling range:	> 280°C / 536°F estimated
Pour point:	Typical -15 °C / 5 °F
Flash point:	Typical 280 °C / 536 °F (COC)
Upper/lower combustion or explosion limits:	Typical 1-10% (V) (on mineral oil basis)
Auto-ignition temperature:	> 320 °C / 608 °F
Vapour pressure:	< 0.5 Pa at 20 °C / 68 °F (estimated)
Relative density:	Typical 0.891 at 15° C / 59 °F
Density:	Typical 891 kg/m ³ at 15° C / 59 °F
Solubility in water:	Negligible
Solubility in solvents:	No data available
Partition coefficient n-octanol/water:	> 6 (based on information provided for comparable products)
Dynamic viscosity:	No data available
Kinematic viscosity:	Typical 220 mm ² /s at 40 °C / 104 °F
Vapour density (Air=1):	> 1 (estimated)
Evaporation rate (nBuAc=1):	No data available
Decomposition temperature:	No data available
Flammability:	No data available
Oxidising properties:	No data available
Explosive properties:	Not classified

9.2 Further information

Electrical conductivity: It is not expected that this material is a static accumulator.

Other Information: No volatile organic components

Volatile organic compounds: 0%

10. Stability and reactivity

10.1 Reactivity

Except for the reactivity-caused hazards shown in the following sub-section, this product does not pose any further risks of this nature.

10.2 Chemical stability

Hazardous reactions are not expected if the material is handled and stored according to the regulations.

10.3 Potential of dangerous reactions:


Reacts with oxidising agents

10.4 Conditions to avoid

Extreme temperatures and direct sunlight.

10.5 Incompatible materials:

Strong oxidants.

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10.6 Hazardous decomposition products:

Hazardous decomposition products are not expected to form during normal storage.

11. Toxicological information

11.1 Information on toxicological effects

Basis for assessment:

Information given is based on knowledge of the components and the toxicology of similar products. If not indicated otherwise, the data presented apply to the product in its entirety and not to individual components.

Potential exposure paths:

Skin and eye contact are the main exposure paths, however, accidental ingestion may also occur.

Acute oral toxicity: Practically non-toxic (estimated): LD50 > 5000 mg/kg, rat

Acute dermal toxicity: Practically non-toxic (estimated): LD50 > 5000 mg/kg, rabbit

Acute inhalation toxicity: Not considered to be an inhalation hazard under normal conditions of use.

Skin decomposition, irritation: Mild irritant.

Serious injury or irritation of the eyes: Mild irritant.

Respiratory irritation: Inhaling vapours or mist can cause irritation.

Sensitization of airways or skin: Regarding airways or skin sensitisation: Presumably not a sensitising agent.

Aspiration hazard: Not considered to be an aspiration hazard.

Mutagenicity: Not considered to be a mutagenic hazard.

Carcinogenicity: No formation of cancer (estimated). Product is based on mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are considered non-carcinogenic by the International Agency for Research on Cancer.

Product	Carcinogenicity classification
Highly refined mineral oil (IP346 <3%)	ACGIH Group A4: Not classified as carcinogenic in humans.
Highly refined mineral oil (IP346 <3%)	IARC 3: Not classified as carcinogenic in humans.
Highly refined mineral oil (IP346 <3%)	GHS/CLP: Not classified as carcinogenic.

Reproductive and developmental toxicity: No danger expected.

Summary of the assessment of CMR properties

Carcinogenicity: This product does not meet the criteria for a classification in the categories 1A/1B.

Mutagenicity: This product does not meet the criteria for a classification in the categories 1A/1B.

Reproduction toxicity (fertility): This product does not meet the criteria for a classification in the categories 1A/1B.

Specific target organ toxicity (single exposure): No danger expected.

Specific target organ toxicity (repeated exposure): No danger expected.

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Additional information:

Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. All used oil should be handled with caution, and a skin contact is to be avoided as much as possible. Classifications by other authorities according to different regulations may exist.

12. Ecological information

Basis for assessment

Ecotoxicological data have not been determined specifically for this product. Information given is based on knowledge of the components and the ecotoxicology of similar products. If not indicated differently, the data presented apply to the product in its entirety and not to individual components.

12.1 Toxicity

Acute toxicity: Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be practically non toxic: LL/EL50 >100 mg/l. (for aquatic organisms) (LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract). Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations of less than 1 mg/l.

12.2 Persistence and degradability

Not expected to be readily biodegradable. Major constituents are expected to be inherently biodegradable but the product contains components that may persist in the environment.

12.3 Bioaccumulation potential

Contains components with the potential to bioaccumulate.

12.4 Mobility in soil

Remains liquid. Immobilised by absorption in earth particles. Floats on surface of water.

12.5 Results of PBT and vPvB assessment

This mixture does not contain REACH-registered substances classified as PBT or vPvB.

12.6 Other adverse effects

The product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. Disposal considerations

13.1 Waste treatment methods

Product disposal:

Recover or recycle where possible. It is the responsibility of the waste creator to establish the toxicity and physical characteristics of the materials in order to classify the waste and establish the correct method of disposal in accordance with the applicable regulations. Do not allow to escape to the environment or into sewers or drains.

Container disposal:


Dispose of the material in accordance with the existing regulation, using a certified disposal specialist whose suitability has been verified in advance.

National legislation:

Disposal must be in accordance with regional, national and local laws and regulations.

EU waste code number: 13 02 05* Non-chlorinated machine and gear oils and lubricants based on mineral oil.

Classification of waste is always the responsibility of the end user.

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14. Transport Information

This product is classified as harmless for the following types of transport:

Road and rail (ADR / RID), Domestic waterways (ADN) / Sea (IMDG-Code) / Air (IATA).

Thus, the items 14.1 UN Number, 14.2 Proper UN shipping name, 14.3 Transport hazard classes, 14.4 Packaging group, 14.5 Environment hazards, and 14.6 Special precautions are not relevant to the user.

Transport on domestic waterways (ADN): CDNI Convention on the Collection, Deposit and Reception of Waste produced during Navigation on the Rhine and Inland Waterways: NST 3411 Mineral oil lubricants

14.7 Bulk transportation in accordance with Annex II of the MARPOL Convention 73/78 and IBC Code

Not applicable

Additional information

For bulk transportation on seaways, please observe the provisions provided in MARPOL Annex 1.

15. Regulatory information

The information on legal regulations is not claimed to be full and complete. Other regulations may also apply to the product.

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

Other information for regulation purposes

Authorisation and/or restriction of use: The product is not subject to approval by REACH.

Recommended limitations of use (prohibitions): Without prior consultation with the supplier, this product may not be used for any other applications other than those stipulated in Section 1.

Local inventories

EINECS: All components listed or exempt (polymer).

TSCA: All components listed.

National regulations (Germany):

Water hazard class: 1 – slightly hazardous to water (Annex 4, VwVwS, Preparations)

Other information: Technical Instructions on Air Quality: Product not listed by name. Observe Section 5.2.5 in connection with Section 5.4.9.

15.2 Chemical safety assessment

The manufacturer has not performed a chemical safety assessment for this substance or mixture.

16. Further information

Not classified

Additional information: This safety data sheet does not have an annex containing exposure scenarios, because it is a non-classified mixture from harmless substances.

Other Information

Legend to the abbreviations used in this safety data sheet

The standard abbreviations and acronyms used in this document can be found in relevant reference literature (such as scientific dictionaries) or websites.

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ADN	European Agreement Concerning the International Carriage of Dangerous Goods By Inland Waterways (ADN)
EC	European Community
EN	European Standard
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ISO	International Standard Organization
PPE	Personal protective equipment
TRGS	Technical rules for dangerous goods
VO	Regulation
VOC	Volatile organic compounds
VwVwS	German Regulation on Substances Hazardous to Water
WGK	Water hazard class
ACGIH	American Conference of Governmental Industrial Hygienists
ADR	European Agreement Concerning The International Carriage of Dangerous Goods by Road
AICS:	Australian List of Chemical Substances
CLP	Classification, Labelling and Packaging of Chemicals
COC	Flashpoint test according to Cleveland open cup method
DIN	German Standards Institute
EC	European Commission
EINECS	European Inventory of Existing Commercial chemical Substances
IATA	International Air Transport Association
IL50	Inhibition level 50
IMDG	International Maritime Dangerous Goods
IP346	"Institute of Petroleum" (IP) Test method No. 346 Determination of polycyclic aromatics DMSO extractable
LD50	Lethal dose 50
LL/EL/IL	Lethal Level/Exposure Limit/Inhibition Limit
MARPOL	International Convention for the Prevention of Pollution From Ships
PBT	Persistent, Bioaccumulative, Toxic
PNEC	Predicted no-effect concentration
REACH	Registration, Evaluation, Authorisation and restriction of CHemicals
RID	Regulation Relating to International Carriage of Dangerous Goods by Rail
TSCA	US Toxic Substances Control Act
TWA	Time-weighted Average
vPvB	very persistent and very bioaccumulative

Safety data sheet directive: Regulation 1907/2006/EC (REACH).

The information in this safety data sheet is based on current knowledge and experience and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not, therefore, be construed as a guarantee of any specific property of the product.