KAESER KOMPRESSOREN

Safety Data Sheet

according to WHS regulation

KAESER OMEGA FLUID SB 220 (894344.0, 894344.00020, 831057.0, 831057.00010, 831057.00020)

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

1.1. Product identifier

KAESER OMEGA FLUID SB 220 (894344.0, 894344.00020, 831057.0, 831057.00010, 831057.00020)

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

Use of the substance/mixture

Cooling oil with Corrosion inhibitor

Uses advised against

Any non-intended use.

1.3. Details of the supplier of the safety data sheet

Company name:	KAESER Compressors Pty Ltd
Street:	45 Zenith Road
Place:	Dandenong South Melbourne Vic 3175
Telephone:	61 3 97915999
Responsible Department:	msds.au@kaeser.com

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to WHS Regulation

This mixture is not classified as hazardous in accordance with WHS regulations.

2.2. Label elements

WHS Regulation

Special labelling of certain mixtures

AUH066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components or components with occupational exposure limits (OEL)

CAS No	EC-No.	Chemical name	Quantity
9003-29-6		Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)	>=25 - =<50 %

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

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

After inhalation

Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. When in doubt or if symptoms are observed, get medical advice.

After contact with skin

Take off immediately all contaminated clothing. Rinse skin with water/shower. In case of skin irritation, consult a physician.

After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye irritation consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Observe risk of aspiration if vomiting occurs. Never give anything by mouth to an unconscious person or a person with cramps. When in doubt or if symptoms are observed, get medical advice.

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

After eye contact: No information available.
Inhalation: No information available.
Skin contact: Has de-greasing effect on the skin.
ingestion.: No information available.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

In case of fire:
Carbon dioxide (CO2)
Dry extinguishing powder
Foam
In case of major fire and large quantities:
Water spray jet

Unsuitable extinguishing media

High power water jet

5.2. Special hazards arising from the substance or mixture

Can be released in case of fire: Carbon dioxide (CO2). Carbon monoxide. Nitrogen oxides (NOx). Sulfur oxides.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. In case of fire and/or explosion do not breathe fumes.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Use water spray jet to protect personnel and to cool endangered containers.
Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For emergency responders: Avoid contact with skin, eyes and clothes. Wear personal protection equipment (refer to section 8).
For non-emergency personnel: Avoid contact with skin, eyes and clothes. Wear personal protection equipment (refer to section 8).

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Cover drains.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.
Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Do not breathe vapour/aerosol. Avoid contact with skin, eyes and clothes.
Wear personal protection equipment (refer to section 8).

Advice on protection against fire and explosion

Usual measures for fire prevention.

Further information on handling

Advices on general occupational hygiene: See section 8.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed and in a well-ventilated place.
Keep only in original container.
Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

Hints on joint storage

Do not store together with: Gas. Explosive hazardous substances. Oxidising substances (solid). Oxidising substances (liquid) Radioactive substances. Infectious substances.
Keep away from food, drink and animal feedingstuffs.

Further information on storage conditions

Protect against: UV-radiation/sunlight.. Heat.

7.3. Specific end use(s)

refer to section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional advice on limit values

Air limit values:
Possibility of exposure to Aerosol (Mineral oil)
Limit value (TLV-TWA) = 5 mg/m3 - Source: ACGIH
Limit value (TLV-STEL) = 10 mg/m3 - Source: ACGIH

STEL: short-term exposure limits
TLV: Threshold Limiting Value
TWA: time weighted average
ACGIH: American Conference of Governmental Industrial Hygienists

Recommended monitoring procedures:
DIN-/EN-Norms: EN 689, EN 14042, EN 482

8.2. Exposure controls

Appropriate engineering controls

Vapours / aerosols should be extracted by suction directly at point of origin.

Protective and hygiene measures

Always close containers tightly after the removal of product. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Take off contaminated clothing.
Do not put any product-impregnated cleaning rags into your trouser pockets.

Eye/face protection

Recommended eye protection articles: Eye glasses with side protection Standards: AS/NZS 1336:1997, AS/NZS 1337 part 1-6

Hand protection

In case of prolonged or frequently repeated skin contact: Wear suitable gloves. Standard: AS/NZS 2161 Set: 2008
Suitable material: NBR (Nitrile rubber).
Thickness of the glove material : 0,35 mm
Breakthrough time > 480 min.
Check leak tightness/impermeability prior to use. Breakthrough times and swelling properties of the material must be taken into consideration.

Skin protection

Protective clothing.

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.
Respiratory protection necessary at:
Generation/formation of aerosols
Recommended respiratory protection articles: Combination filtering device (AS/NZS 1716:2003).
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

Environmental exposure controls

Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Golden
Odour:	Characteristic

	Test result	Test method
pH-Value:	Not determined	Not applicable
Changes in the physical state		
Melting point:	Not determined	Not applicable
Initial boiling point and boiling range:	>371 °C	Not known
Sublimation point:	not determined	
Softening point:	not determined	
Pour point:	-42 °C	Not known
Flash point:	229 °C	Open Cup
Sustaining combustion:	No data available	Not applicable
Flammability		
Solid:	Not applicable	
Gas:	Not applicable	

Explosive properties
none

Lower explosion limits:	Not determined	
Upper explosion limits:	Not determined	
Ignition temperature:	Not determined	Not applicable

Auto-ignition temperature

Gas:	not determined	
Decomposition temperature:	Not determined	Not applicable

Oxidizing properties
none

Vapour pressure: (at 25 °C)	0,1 hPa	Not applicable
Vapour pressure:		
Density:	0,87 g/cm³	Not known
Bulk density:	The product has not been tested.	Not applicable
Water solubility:	Immiscible	Not applicable

Solubility in other solvents
Not determined

Partition coefficient:	The product has not been tested.	
Viscosity / dynamic: (at 100 °C)	20,5 mPa·s	calculated
Viscosity / kinematic: (at 40 °C)	220 mm²/s	Not known
Flow time:	Not determined	Not applicable
Vapour density:	>1[Air=1]	Not known
Evaporation rate:	Not determined	Not applicable
Solvent separation test:	Not determined	
Solvent content:	Not determined	

9.2. Other information

Solid content:	Not determined

Auto-ignition temperature: > 315°C

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

Reacts with : Oxidizing agents, strong.

10.4. Conditions to avoid

UV-radiation/sunlight. Heat

10.5. Incompatible materials

Oxidizing agents, strong.

10.6. Hazardous decomposition products

Can be released in case of fire: Carbon dioxide (CO_2). Carbon monoxide. Nitrogen oxides (NO_x). Sulfur oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicocinetics, metabolism and distribution

No information available.

Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure route	Dose		Species	Source
9003-29-6	Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)				
	oral	LD50	>10000 mg/kg	Rat	ECHA Dossier
	dermal	LD50	>2000 mg/kg	Rat	ECHA Dossier
	inhalation (4 h) vapour	LC50	[>19,17] mg/l	Rat	ECHA Dossier

Irritation and corrosivity

Based on available data, the classification criteria are not met.
Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene):
Serious eye damage/eye irritation:
Method : OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Species: Rabbit
Result / evaluation : Not an irritant.; Literature information: ECHA Dossier

Sensitising effects

Based on available data, the classification criteria are not met.
Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene):
Skin sensitisation:
Method: OECD Guideline 406
Species: Guinea pig
Result / evaluation: not sensitising. Literature information: ECHA Dossier

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.
Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene):
In-vitro mutagenicity:
Method: OECD Guideline 471, OECD Guideline 473
Result: negative. Literature information: ECHA Dossier
In-vivo mutagenicity:
Method: OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Result: negative. Literature information: ECHA Dossier
Reproductive toxicity:
Method: OECD Guideline 421
Species: Rat.; Exposure route: oral.
Result: NOAEL (P) = 1000 mg/kg ; NOAEL (F1) = 1000 mg/kg; Literature information: ECHA Dossier
Developmental toxicity/teratogenicity:
Method: OECD Guideline 422
Species: Rat.; Exposure route: oral.
Result: NOAEL > 1000 mg/kg; Literature information: ECHA Dossier

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Repeated exposure may cause skin dryness or cracking.
Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene):
Subchronic oral toxicity:
Method: OECD Guideline 408
Species: Rat
Exposure time: 90 d.
Result: NOAEL >= 1000 mg/kg; Literature information: ECHA Dossier

Subchronic inhalation toxicity:
Method: -
Species: Rat
Exposure time: OECD Guideline 413
Result / evaluation: NOEC = 1000 mg/m³; Literature information: ECHA Dossier
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Aspiration hazard

Based on available data, the classification criteria are not met.

Specific effects in experiment on an animal

There are no data available on the preparation/mixture itself.

SECTION 12: Ecological information

12.1. Toxicity

The product has not been tested.

CAS No	Chemical name				
	Aquatic toxicity	Dose	[h] | [d]	Species	Source
9003-29-6	Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)				
	Acute algae toxicity	ErC50 >19,2 mg/l	72 h	Desmodesmus subspicatus (OECD 201)	ECHA Dossier

12.2. Persistence and degradability

Some of the components are poorly biodegradable. The statement is derived from the properties of the single components.
Due to its low solubility in water the product is almost completely mechanically separated in biological sewage plants.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
9003-29-6	Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)			
	OECD Guideline 310	93,9 %	28	ECHA Dossier
	Easily biodegradable (concerning to the criteria of the OECD)			

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
9003-29-6	Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)	7,6-7,8

BCF

CAS No	Chemical name	BCF	Species	Source
9003-29-6	Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)	920-3340	Carp	ECHA Dossier

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects

No data available

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Observe in addition any national regulations! Consult the local waste disposal expert about waste disposal.
Non-contaminated packages may be recycled.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADG)

14.1. UN number:	No dangerous good in sense of these transport regulations.
14.2. UN proper shipping name:	No dangerous good in sense of these transport regulations.
14.3. Transport hazard class(es):	No dangerous good in sense of these transport regulations.
14.4. Packing group:	No dangerous good in sense of these transport regulations.

Marine transport (IMDG)

14.1. UN number:	No dangerous good in sense of these transport regulations.
14.2. UN proper shipping name:	No dangerous good in sense of these transport regulations.
14.3. Transport hazard class(es):	No dangerous good in sense of these transport regulations.
14.4. Packing group:	-

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	No dangerous good in sense of these transport regulations.
14.2. UN proper shipping name:	No dangerous good in sense of these transport regulations.
14.3. Transport hazard class(es):	No dangerous good in sense of these transport regulations.
14.4. Packing group:	-

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	No
Danger releasing substance:	Not relevant

14.6. Special precautions for user

See section 8.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not relevant

SECTION 15: Regulatory information

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

2010/75/EU (VOC):	Not determined
2004/42/EC (VOC):	Not determined

The product has been classified according to WHS regulations and categories of the GHS.

Montreal Protocol (Ozone depleting substances):
Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene) not listed

The Stockholm Convention (Persistent Organic Pollutants):
Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene) not listed

Substance/product listed in the following inventories:

AICS:
Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene), CAS no.: 9003-29-6: listed

SECTION 16: Other information

Changes

Rev. 11.00; 29.05.2015, Initial release
Rev. 12.00: 24.11.2017; Changes in chapter: 1-16
Rev. 12,10: 01.10.2018; Changes in chapter: 3

Abbreviations and acronyms

ACGIH:American Conference of Governmental Industrial Hygienists
ASTM: American Society for Testing and Materials.
ATE: acute toxicity estimate
ADG: The Australian Dangerous Goods Code
AS/NZS: Australian/New Zealand Standards
AICS: Australian Inventory of Chemical Substances
AES: Australian Exposure Standard.
BCF: Bio concentration factor
CAS: Chemical Abstracts Service
d: days
DIN: Norm of the Deutsche Institut für Normung (German Institute for Standardization)
EC: Effective Concentration
EG: European Community (Europäische Gemeinschaft)
EN: European Norm
ECHA: European Chemicals Agency
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
h: hours
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of ships carrying Dangerous Chemicals in Bulk
ICAO: International Civil Aviation Organization
IMDG: International Maritime Code for Dangerous Goods
ISO: Norm of the International Standards Organization
IUCLID: International Uniform ChemicaL Information Database
LC: Lethal concentration
LD: Lethal dose
log Kow: Octanol/water partition coefficient
LOAEL: Lowest observed adverse effect level
LOAEC: Lowest observed adverse effect concentration
MARPOL: Maritime Pollution Convention = Convention for the Prevention of Maritime Pollution from Ships
NOAEL: No observed adverse effect level
NOAEC: No observed adverse effect concentration

OECD: Organisation for Economic Co-operation and Development
PBT: Persistent, bio-cumulative, toxic
UN: United Nation
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
RTECS: Registry of Toxic Effects of Chemical Substances
STOT: Specific Target Organ Toxicity
STEL: Short term exposure limit
TWA: Time-weighted average
TLV: Threshold Limiting Value
VOC: Volatile Organic Compounds
vPvB: very persistent and very bio-cumulative
WHS: Work Health and Safety Regulations

Further Information

Classification according to WHS Regulation: - Classification procedure:
Health hazards: Calculation method.
Environmental hazards: Calculation method.
Physical hazards: On basis of test data. and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)