

1. Identity of substance, preparation, and supplying company

Product trade name:	SIGMA S-460 Synthetic Air Compressor Fluid (Sigma Lubricants S-460), 9.5409.0, 9.5409.00010, 9.5409.00020, 9.5409.00030, 9.5409.00040
Supplier:	KAESER COMPRESSORS AUSTRALIA PTY. LTD. 45 Zenith Road Melbourne/Victoria Dandenong South 3175
Email:	msds.au@kaeser.com
Technical information:	(+61) 3-9791-5999
Emergency telephone number:	(+61) 3-9791-5999 (08.30 – 05.00 pm on workdays)
Application:	Cooling oil with corrosion inhibitor

2. Possible hazards/effects on health

Eye contact:	May cause irritation.
Inhalation:	Hydrocarbon mist may make breathing difficult.
Ingestion:	May cause diarrhoea.
Skin contact:	May irritate after prolonged contact.

3. Composition/information on ingredients

Chemical properties

PAO-based lubricant and additives

Components	CAS number	EINECS number	Proportion in percent, remarks
Synthetic polyester	68515-49-1		5 – 10
Synthetic poly alpha olefin (PAO)	68037-01-4		75 – 80
Hydrogenated ISO paraffin	64742-54-7	265-157-1	10 – 15, less than 3% DMSO extractable components as per IP 346
Synthetic oxidation inhibitor	68921-45-9		0,5 – 1
Synthetic corrosion inhibitor	28015-99-8		0,5 – 1
Synthetic ashless EP additive	10254-57-6		1 – 5
Synthetic oxidation inhibitor	41484-35-9		0,5 - 1

This product contains no hazardous substances within the definition of OSHA regulation 29 CFR 1910.1200.

4. First-aid measures

Eye contact:

Rinse open eyes thoroughly for a few minutes under running water. Seek medical help if irritation persists.

Inhalation:

Clear air passages of oil mist. Seek medical help if respiration difficulty continues.

Ingestion:

Wash out the mouth immediately. Do not induce vomiting. Obtain medical attention.

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Skin contact:

Wash thoroughly with skin cleaner, then with soap and water. Contaminated clothing should be dry-cleaned before reuse.

5. Fire-fighting measures

Suitable extinguishing media:

Foam, powder, carbon dioxide, sand, earth and water mist.

Unsuitable or unsafe extinguishing media:

Powerful water jet.

Special protective equipment for firefighting:

Self-contained breathing apparatus.

6. Accidental release measures

Personal precautions

Wear protective gloves and clothing.

Environment protection measures:

Prevent escape and entry into the sewage or surface water systems.

Escaped fluid:

Use sand, earth or an absorption substance to dam or soak-up the spillage. Prevent escape and entry into the sewage or surface water systems. Large volumes may be pumped.

7. Handling and storage

Handling:

Notes on safe handling:

No special handling precautions necessary.

Storage:

Storage room and container requirements:

Avoid sunlight and direct heat sources.

8. Exposure control and personal protection

ACGIH TLV (max. concentration at place of work (threshold limit value) according to American Conference of Governmental Industrial Hygienists) 10 mg/m³ as mist.

Chemical name	OSHA PEL in mg/m ³	ACGIH TLV in mg/m ³	Supplier OEL
Hydrogenated ISO paraffin TWA	5	5	not listed
Hydrogenated ISO paraffin STEL	not listed	10	not listed

Respiratory protection:

Not needed under normal conditions of use. If oil mist cannot be controlled, use a respirator fitted with a filter for organic vapours and a particulate filter.

Hand protection:

Extra-sensitive persons should use oil-proof working gloves.

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Eye protection:

Wear safety glasses if splashing could occur.

Body protection:

Protective overalls

9. Physical and chemical properties

Physical properties

Form: Liquid

Colour: gold/yellow

Odour: mild hydrocarbons

Safety-relevant data:

pH value:	neutral
Boiling point	> 371° C (700 °F)
Pour point (DIN ISO 3016)	< - 30 °C
Flash point (DIN ISO 2592) and method	> 238° C (460 °F) COC
Autoignition temperature	> 315° C (600 °F)
Evaporation rate (butyl acetate)	negligible
Vapour pressure (20° C)	< 0,01 kPa
Volatiles	none
Density (15° C) (DIN 51 757 D)	> 860 kg/m ³ (> 0.86 g/cm ³)
Flammability (ambient temperature)	not flammable
Fire-provoking characteristics	none
Solubility in water (20° C)	insoluble
Vapour density	greater than air
Kinetic viscosity (40° C) (DIN 51 562, T.1)	41.4-50.6 mm ² /s (cSt)
Kinetic viscosity (100° C) (DIN 51 562, T.1)	7.3-50.6 mm ² /s (cSt)

10. Stability and reactivity

Stability:

Stable under normal conditions. No photo-reactive agents.

Conditions to avoid:

Powerful source of ignition and extreme temperatures.

Substances to avoid:

Strong organic and inorganic acids and oxidising agents.

Hazardous decomposition products:

Burning generates smoke, soot, hydrocarbons, CO, CO₂, sulphur and nitrogen oxides. Residue mainly comprises soot and mineral oxides.

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11. Toxicological information

Acute toxicity:

Oral LD50: > 2000 mg/kg

Extrapolated from component data

Inhalation LC50: not applicable

Skin effects: very mild

Chronic toxicity: none known

Subchronic toxicity: none known

Carcinogenicity:

IARC: no

NTP: no

OSHA: no

Sensitization: not known

12. Ecological information

Mobility

Should the fluid escape to the environment, it will be adsorbed by sediment and soil.

Behaviour:

Relatively good behaviour. No bio-accumulating potential.

Environmental pollution:

Because of its relative density and the liquid aggregate state of the product it either floats or spreads out on water, a state that results in a harmless form of contamination. It is not assumed that the product is damaging to organisms in water and on land.

13. Disposal considerations

Product:

Recommendation: Hand over to an authorised disposal contractor.

Waste disposal code as per AVV (German Waste List Regulation):

130206* synthetic machine, gear, and lubricating oils.

Contaminated packaging:

Recommendation: Empty containers completely. Hand over to a licensed disposal contractor.

Recommended cleaning agent: Cleaning by recycler.

14. Transport Information

Not dangerous for conveyance under UN, IMO/IMDG, ADR/RID and IATA/ICAO codes.

15. Regulatory information

Marking according to EC directives: NOT SUBJECT TO MARKING OBLIGATION

S-phrases: S 3: Keep in a cool place, S16: Keep away from sources of ignition - No smoking.

Special marking and specific preparations:

(as per Annex II of the Dangerous Preparations Directive 88/379/EWG): not listed.

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National regulations

Notes on use limitations:

no limitations

Industrial accident ordinance:

not named in Annex II.

Classification according to German work safety regulations:

not classified

Technical Instructions on Air Quality:

Class 3 (organic)

Water hazard class:

WGK 1 (self declared)

16 Other Information

Further information:

Concawe Report 5/87, Health Aspects of Lubricants; DGMK report 400-7

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.