

Safety data sheet according to Regulation (EC) No 1272/2008, Annex II

1. Identification

Material Name	Bauer-Kompressorenöl
Product Code	N18246
Product Use	Compressor oil
Uses Advised Against	This product must not be used in applications other than those recommended in Section 1, without first seeking the advice off the supplier.
Manufacturer/Supplier	BAUER KOMPRESSOREN GmbH, Stäblistraße 8, D-81477 München Telefon +49(0)89-78049-0, Telefax +49(0)89-78049-167
Emergency Telephone Number	Telefon +49(0)89-78049-0

2. Hazards Identification

Classification of the substance or mixture	Classification according to Regulation (EC) 1272/2008 Not Classified
Label elements	No Label elements according to Regulation (EC) 1272/2008
Other hazards	No significant hazards. High-pressure injection under skin may cause serious damage. Excessive exposure may result in eye, skin, or respiratory irritation. Material does not meet the criteria for PBT or vPvB in accordance with REACH Annex XIII

3. Composition/information on ingredients

Substances	Not applicable. This material is regulated as a mixture.
Mixtures	This material is defined as a mixture.

Reportable hazardous substance(s) complying with the classification criteria and/or with an exposure limit (OEL)

Name	CAS#	EC#	Registration#	Concentration*	GHS/CLP classification
ZINC ALKYL DITHIOPHOSPHATE	113706-15-3		01-2119543726-33	1 - < 2.5%	Skin Irrit. 2 H315, Eye Dam. 1 H318, [Acute Tox. 5 H303], [Aquatic Acute 2 H401], Aquatic Chronic 2 H411

Note - any classification in brackets is a GHS building block that was not adopted by the EU in the CLP regulation (No 1272/2008) and therefore is not applicable in the EU or in non-EU countries which have implemented the CLP regulation and is shown for informational purposes only.

Name	CAS#	EC#	Registration#	Concentration*	DSD Symbols/Risk Phrases
ZINC ALKYL DITHIOPHOSPHATE	113706-15-3		01-2119543726-33	1 - < 2.5%	Xi;R38, Xi;R41, N;R51/53

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Note: See (M)SDS Section 16 for full text of the R-Phrases. See (M)SDS Section 16 for full text of hazard statements.

4. First aid measures

Inhalation

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

Skin contact

Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

Eye contact

Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion	First aid is normally not required. Seek medical attention if discomfort occurs.
Most important symptoms and effects, both acute and delayed	Local necrosis as evidenced by delayed onset of pain and tissue damage a few hours after injection.
Indication of any immediate medical attention and special treatment needed	The need to have special means for providing specific and immediate medical treatment available in the workplace is not expected.

5. Firefighting measures

Suitable extinguishing media	Use water fog, foam, dry chemical or carbon dioxide (CO ₂) to extinguish flames.
Unsuitable extinguishing media	Straight streams of water
Special hazards arising from the substance or mixture	Hazardous Combustion Products: Oxides of carbon, Sulphur oxides, Incomplete combustion products, Aldehydes, Smoke, Fume
Advice for firefighters	Fire Fighting Instructions: Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.
Flammability Properties	Flash Point [Method]: >230°C (446°F) [ASTM D-92] Upper/Lower Flammable Limits (Approximate volume % in air): UEL: 7.0 LEL: 0.9 [Estimated] Autoignition Temperature: No data available

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	<p>NOTIFICATION PROCEDURES</p> <p>In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.</p> <p>PROTECTIVE MEASURES</p> <p>Avoid contact with spilled material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be</p>
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necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

Environmental precautions

Large Spills: Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Land Spill: Stop leak if you can do so without risk. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do so without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

Reference to other sections

See Sections 8 and 13.

7. Handling and storage

Precautions for safe handling

Avoid contact with used product. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present (e.g., during switch-loading operations). Use proper bonding and/or earthing procedures. However, bonding and earthing may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

Conditions for safe storage, including any incompatibilities

The container choice, for example storage vessel, may effect static accumulation and dissipation. Do not store in open or unlabelled containers.

Specific end use(s)

Section 1 informs about identified end-uses. No industrial or sector specific guidance available.

8. Exposure controls/personal protection

Appropriate engineering controls

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

Personal Protection

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Eye/face protection

If contact is likely, safety glasses with side shields are recommended.

Hand protection

Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:
No protection is ordinarily required under normal conditions of use.

Skin protection – other

Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

Respiratory protection

If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No special requirements under ordinary conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Specific Hygiene Measures

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

Environmental controls

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

9. Physical and chemical properties

Physical state	Liquid
Colour	Amber
Odour	Characteristic
Odour threshold	No data available
pH-value	Not technically feasible
Melting point/freezing point	Not technically feasible
Initial boiling point and boiling range	>316°C (600°F) [Estimated]
Flash point	>230°C (446°F) ASTM D-92
Evaporation rate	No data available
Flammability (solid, gas)	Not technically feasible
Lower flammable limit	LEL: 0.9
Upper flammable limit	UEL: 7.0
Vapour pressure	<0.013 kPa (0.1 mm Hg) at 20°C [Estimated]
Vapour density (air = 1)	No data available
Relative Density (at 15 °C)	0.883 [ASTM D4052]
Water solubility	Negligible
Partition coefficient (n-octanol/water)	> 3.5 [Estimated]
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	107 cSt (107 mm ² /sec) at 40°C 14.5 cSt (14.5 mm ² /sec) at 100°C [ASTM D445]
Explosive properties	None
Oxidising properties	None
Pour Point	-27°C (-17°F) [ASTM D97]
DMSO Extract (mineral oil only), IP-346	<3% wt

10. Stability and reactivity

Reactivity	See sub-sections below.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization will not occur.
Conditions to avoid	Excessive heat. High energy sources of ignition.
Incompatible materials	Strong oxidisers
Hazardous decomposition products	Material does not decompose at ambient temperature

11. Toxicological information

Information on toxicological effects

Hazard Class	Conclusion / Remarks
Inhalation	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Irritation: No end point data for material.	Negligible hazard at ambient/normal handling temperatures.
Ingestion	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin Corrosion/Irritation: No end point data for material.	Negligible irritation to skin at ambient temperatures. Based on assessment of the components.
Eye	
Serious Eye Damage/Irritation: No end point data for material.	May cause mild, short-lasting discomfort to eyes. Based on assessment of the components.
Sensitisation	
Respiratory Sensitization: No end point data for material.	Not expected to be a respiratory sensitizer.
Skin Sensitization: No end point data for material.	Not expected to be a skin sensitizer. Based on assessment of the components.
Aspiration: Data available.	Not expected to be an aspiration hazard. Based on physico-chemical properties of the material.
Germ Cell Mutagenicity: No end point data for material.	Not expected to be a germ cell mutagen. Based on assessment of the components.
Carcinogenicity: No end point data for material.	Not expected to cause cancer. Based on assessment of the components.
Reproductive Toxicity: No end point data for material.	Not expected to be a reproductive toxicant. Based on assessment of the components.
Lactation: No end point data for material.	Not expected to cause harm to breast-fed children.
Specific Target Organ Toxicity (STOT)	
Single Exposure: No end point data for material.	Not expected to cause organ damage from a single exposure.
Repeated Exposure: No end point data for material.	Not expected to cause organ damage from prolonged or repeated exposure. Based on assessment of the components.

OTHER INFORMATION

Diesel engine oils: Not carcinogenic in animals tests. Used and unused diesel engine oils did not produce any carcinogenic effects in chronic mouse skin painting studies. Oils that are used in gasoline engines may become hazardous and display the following properties: Carcinogenic in animal tests. Caused mutations in vitro. Possible allergen and photoallergen. Contains polycyclic aromatic compounds (PAC) from combustion products of gasoline and/or thermal degradation products.

Contains:

Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or other screening tests. Dermal and inhalation studies showed minimal effects; lung non-specific infiltration of immune cells, oil deposition and minimal granuloma formation. Not sensitising in test animals. Tetrapropenyl phenol (TPP). TPP was tested in a rat oral gavage one-generation reproductive toxicity study and a rat dietary two-generation reproductive toxicity study. Results from the one-generation study included reduced ovary weights and changes in male reproductive accessory organs. Results from the two-generation study included prolonged estrous cyclicity, reduced ovary weights, accelerated sexual maturation, decreased mean live litter size, decreased fertility rates, hypospermia, and reduced weights of male reproductive accessory organs. A Specific Concentration Limit (SCL) for reproductive effects of 1.5 wt% TPP was derived by the supplier based on the NOAEL (15 mg/kg/day) from the rat dietary two-generation study and was confirmed in supporting studies with other substances containing TPP as an impurity.

12. Ecological information

Toxicity	Material -- Not expected to be harmful to aquatic organisms.
Persistence and degradability	Base oil component – Expected to be inherently biodegradable
Bioaccumulative potential	Base oil component -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.
Mobility in soil	Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.
Persistence, Bioaccumulation and Toxicity for Substance(s)	This product is not, or does not contain, a substance that is a PBT or a vPvB.
Other adverse effects	No adverse effects are expected

13. Disposal considerations

Waste Treatment Methods

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products. Protect the environment. Dispose of used oil at designated sites. Minimize skin contact. Do not mix used oils with solvents, brake fluids or coolants.

Regulatory Disposal Information

European Waste Code: 13 02 05*
 NOTE: These codes are assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use. Waste producers need to assess the actual process used when generating the waste and its contaminants in order to assign the proper waste disposal code(s).

This material is considered as hazardous waste pursuant to Directive 91/689/EEC on hazardous waste, and subject to the provisions of that Directive unless Article 1(5) of that Directive applies.

Empty Container Warning

Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. **DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.**

14. Transport information

Land (ADR/RID)

Not Regulated for Land Transport

Inland Waterways (ADNR/AND)

Not Regulated for Inland Waterways Transport

Sea (IMDG)

Not Regulated for Sea Transport according to IMDG-Code

Sea (MARPOL 73/78 Convention - Annex II):

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
 Not classified according to Annex II

Air (IATA)

Not Regulated for Air Transport

15. Regulatory information

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

Applicable EU Directives and Regulations:
 1907/2006 [... on the Registration, Evaluation, Authorisation and Restriction of Chemicals ... and amendments thereto]
 1272/2008 [on classification, labelling and packaging of substances and mixtures.. and amendments thereto]

Chemical safety assessment

REACH Information: A Chemical Safety Assessment has been carried out for one or more substances present in the material.

16. Other information

References

Sources of information used in preparing this SDS included one or more of the following: results from in house or supplier toxicology studies, CONCAWE Product Dossiers, publications from other trade associations, such as the EU Hydrocarbon Solvents REACH Consortium, U.S. HPV Program Robust Summaries, the EU IUCLID Data Base, U.S. NTP publications, and other sources, as appropriate.

List of abbreviations and acronyms that could be (but not necessarily are) used in this safety data sheet:

Acronym	Full text
N/A	Not applicable
N/D	Not determined
NE	Not established
VOC	Volatile Organic Compound
AICS	Australian Inventory of Chemical Substances
AIHA WEEL	American Industrial Hygiene Association Workplace Environmental Exposure Limits
ASTM	ASTM International, originally known as the American Society for Testing and Materials (ASTM)
DSL	Domestic Substance List (Canada)
EINECS	European Inventory of Existing Commercial Substances
ELINCS	European List of Notified Chemical Substances
ENCS	Existing and new Chemical Substances (Japanese inventory)
IECSC	Inventory of Existing Chemical Substances in China
KECI	Korean Existing Chemicals Inventory
NDSL	Non-Domestic Substances List (Canada)
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances
TLV	Threshold Limit Value (American Conference of Governmental Industrial Hygienists)

TSCA	Toxic Substances Control Act (U.S. inventory)
UVCB	Substances of Unknown or Variable composition, Complex reaction products or Biological materials
LC	Lethal Concentration
LD	Lethal Dose
LL	Lethal Loading
EC	Effective Concentration
EL	Effective Loading
NOEC	No Observable Effect Concentration
NOELR	No Observable Effect Loading Rate

KEY TO THE RISK CODES CONTAINED IN SECTION 2 AND 3 OF THIS DOCUMENT (for information only):

R38; Irritating to skin.

R41; Risk of serious damage to eyes.

R51/53; Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):

[Acute Tox. 5 H303]: May be harmful if swallowed; Acute Tox Oral, Cat 5

Skin Irrit. 2 H315: Causes skin irritation; Skin Corr/Irritation, Cat 2

Eye Dam. 1 H318: Causes serious eye damage; Serious Eye Damage/Irr, Cat 1

[Aquatic Acute 2 H401]: Toxic to aquatic life; Acute Env Tox, Cat 2

Aquatic Chronic 2 H411: Toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 2

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Revision Changes:

Composition: Component Table for REACH information was modified.

Composition: Component Table information was modified.

Section 15: Section 15 CLP Footnotes information was deleted.