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

1.1 Product identifier

Product name : OKS 230

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

Use of the Sub- : Lubricant

stance/Mixture

Recommended restrictions

on use

Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Company : OKS Spezialschmierstoffe GmbH

Ganghoferstr. 47

D-82216 Maisach-Gernlinden Tel.: +49 8142 3051 500 Fax.: +49 8142 3051 599

E-mail address of person

responsible for the SDS

National contact

mcm@oks-germany.com

1.4 Emergency telephone number

Emergency telephone

number

: (+351) 808 250 143

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.



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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : polyalkylene glycol oil Molybdenum disulfide

Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration limits M-Factor Notes	Concentration (% w/w)
Substances with a worl				
molybdenum disul- phide	1317-33-5 215-263-9			>= 30 - < 50
kaolin	1332-58-7 310-194-1			>= 10 - < 20
lithium 12- hydroxystearate	7620-77-1 231-536-5 01-2119970893-23- XXXX01-2119970893- 23-XXXX01- 2119970893-23- XXXX01-2119970893- 23-XXXX01- 2119970893-23-XXXX			>= 1 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled : Remove person to fresh air. If signs/symptoms continue, get

medical attention.

Keep patient warm and at rest.

If breathing is irregular or stopped, administer artificial respira-

tion.



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In case of skin contact : Remove contaminated clothing. If irritation develops, get med-

ical attention.

In case of contact, immediately flush skin with plenty of water.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids,

for at least 10 minutes.

If eye irritation persists, consult a specialist.

If swallowed : Move the victim to fresh air.

Do not induce vomiting without medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available.

Risks : None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or car-

bon dioxide.

Unsuitable extinguishing

media

High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-

fighting

Fire may cause evolution of:

Carbon oxides Metal oxides

Oxides of phosphorus

Sulphur oxides

5.3 Advice for firefighters

Special protective equipment:

for firefighters

In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment. In the case of respirable dust and/or fumes, use self-contained breathing apparatus. Exposure to decomposition products may be a hazard to

health.

Further information : Standard procedure for chemical fires.



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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Evacuate personnel to safe areas.

Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release

(dust).

Avoid breathing dust.

Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

Environmental precautions : Try to prevent the material from entering drains or water

courses.

Local authorities should be advised if significant spillages

cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Clean up promptly by sweeping or vacuum.

Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the ap-

plication area.

Wash hands and face before breaks and immediately after

handling the product.

Hygiene measures : Wash face, hands and any exposed skin thoroughly after

handling.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

: Store in original container. Keep container closed when not in use. Keep in a dry, cool and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in accordance with the particular national regulations. Keep in properly labelled containers.

7.3 Specific end use(s)

Specific use(s) : Consult the technical guidelines for the use of this sub-

stance/mixture.



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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form	Control parameters	Basis
		of exposure)		
molybdenum dis-	1317-33-5	VLE-MP (Inhala-	10 mg/m3	PT OEL
ulphide		ble fraction)	(Molybdenum)	(2014-11-14)
		VLE-MP (Respir-	3 mg/m3	PT OEL
		able fraction)	(Molybdenum)	(2014-11-14)
kaolin	1332-58-7	VLE-MP (Respir-	2 mg/m3	PT OEL
		able fraction)	_	(2007-03-26)
Further information	The value applies for particulates without asbestos and that contain < 1%			
	cristalline silica, Substances that are not classified as carcinogenic for hu-			
	mans., pneumoconiosis			
lithium 12-	7620-77-1	VLE-MP	10 mg/m3	PT OEL
hydroxystearate				(2007-03-26)
Further information	Not including stearates from toxic metals, Substances that are not classified			
	as carcinogenic for humans., irritation of the upper respiratory tract, Eye irrita-			
	tion, Skin irrita			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Polypropylene glycol (40) butyl ether	Workers	Inhalation	Long-term systemic effects	2,9 mg/m3
	Workers	Skin contact	Long-term systemic effects	0,83 mg/kg
	Consumers	Skin contact	Long-term systemic effects	0,42 mg/kg
	Consumers	Ingestion	Long-term systemic effects	0,42 mg/kg
	Consumers	Ingestion	Acute systemic effects	2,5 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Polypropylene glycol (40) butyl ether	Fresh water	0,333 mg/l
	Marine water	0,0333 mg/l
	Intermittent use/release	3,33 mg/l
	Microbiological Activity in Sewage Treatment Systems	100 mg/l
	Fresh water sediment	5,02 mg/kg
	Marine sediment	0,502 mg/kg
	Soil	0,809 mg/kg



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8.2 Exposure controls

Engineering measures

Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection : Tightly fitting safety goggles

Hand protection

Material : butyl-rubber Protective index : Class 1

Remarks : For prolonged or repeated contact use protective gloves. The

selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. The break through time depends amongst other things on the material, the thickness and the type of glove

and therefore has to be measured for each case.

Respiratory protection : Not required; except in case of aerosol formation.

Filter type : Filter type A-P

Protective measures : The type of protective equipment must be selected according

to the concentration and amount of the dangerous substance

at the specific workplace.

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the spe-

cific work-place.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : paste

Colour : black

Odour : slight

Odour Threshold : No data available

pH : No data available

Melting point/range : No data available

Boiling point/boiling range : No data available



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Flash point : 270 °C

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : < 0,001 hPa (20 °C)

Relative vapour density : No data available

Density : 1,75 g/cm3

(20 °C)

Bulk density : No data available

Solubility(ies)

Water solubility : immiscible

Solubility in other solvents : No data available

Partition coefficient: n-

octanol/water

No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : No data available

9.2 Other information

Sublimation point : No data available

Self-ignition : No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.



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10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : No conditions to be specially mentioned.

10.5 Incompatible materials

Materials to avoid : No materials to be especially mentioned.

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute inhalation toxicity : Remarks: This information is not available.

Acute dermal toxicity : Remarks: This information is not available.

Components:

molybdenum disulphide:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Acute dermal toxicity : LD50 (Rat): > 16.000 mg/kg

kaolin:

Acute oral toxicity : LD50 Oral: > 2.000 mg/kg

lithium 12-hydroxystearate:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rabbit): > 3.000 mg/kg

Assessment: The substance or mixture has no acute dermal

toxicity

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Skin corrosion/irritation

Product:

Remarks: This information is not available.

Components:

molybdenum disulphide:

Assessment: No skin irritation Result: No skin irritation

lithium 12-hydroxystearate:

Assessment: No skin irritation Method: OECD Test Guideline 439

Result: No skin irritation

Serious eye damage/eye irritation

Product:

Remarks: This information is not available.

Components:

molybdenum disulphide:

Assessment: No eye irritation Result: No eye irritation

lithium 12-hydroxystearate:

Species: Rabbit

Assessment: No eye irritation Method: OECD Test Guideline 405

Result: No eye irritation

Respiratory or skin sensitisation

Product:

Remarks: This information is not available.

Components:

molybdenum disulphide:

Assessment: Does not cause skin sensitisation. Result: Does not cause skin sensitisation.

lithium 12-hydroxystearate:

Exposure routes: Dermal

Species: Mouse

Method: OECD Test Guideline 429



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Result: negative

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Components:

molybdenum disulphide:

Germ cell mutagenicity- As-

sessment

: Animal testing did not show any mutagenic effects.

Carcinogenicity

Product:

Remarks: No data available

Components:

molybdenum disulphide:

Carcinogenicity - Assess-

ment

: No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Effects on foetal develop-

ment

: Remarks: No data available

STOT - single exposure

Components:

molybdenum disulphide:

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Components:

molybdenum disulphide:



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Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Product:

Remarks: This information is not available.

Aspiration toxicity

Product:

This information is not available.

Further information

Product:

Remarks: Information given is based on data on the components and the toxicology of similar products.

Components:

molybdenum disulphide:

Remarks: Information given is based on data on the components and the toxicology of similar products.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other :

aquatic invertebrates

Remarks: No data available

Toxicity to algae : Remarks: No data available

Toxicity to microorganisms

Remarks: No data available

Components:

molybdenum disulphide:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l

Exposure time: 96 h

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Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100

mg/l

Exposure time: 72 h

lithium 12-hydroxystearate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

Exposure time: 96 h Test Type: semi-static test

Method: OECD Test Guideline 203

GLP: yes

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): > 160

mq/l

Exposure time: 72 h

Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 160

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Physico-chemical removabili- :

ty

Remarks: No data available

Components:

lithium 12-hydroxystearate:

Biodegradability : Test Type: Primary biodegradation

Inoculum: activated sludge Result: rapidly biodegradable Biodegradation: 74,7 %

Exposure time: 28 d

Method: OECD Test Guideline 301C

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: This mixture contains no substance considered to

be persistent, bioaccumulating and toxic (PBT).

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This mixture contains no substance considered to be very

persistent and very bioaccumulating (vPvB).

Components:

lithium 12-hydroxystearate:

Partition coefficient: n-

octanol/water

: log Pow: 2,6

12.4 Mobility in soil

Product:

Mobility Remarks: No data available

Distribution among environ-

mental compartments

Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment This substance/mixture contains no components considered

> to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of

0.1% or higher...

12.6 Other adverse effects

Product:

tion

Additional ecological informa: No information on ecology is available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product The product should not be allowed to enter drains, water

courses or the soil.

Waste codes should be assigned by the user based on the

application for which the product was used.

Contaminated packaging Packaging that is not properly emptied must be disposed of as

the unused product.

Dispose of waste product or used containers according to

local regulations.

The following Waste Codes are only suggestions:



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SECTION 14: Transport information

14.1 UN number

ADR : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.2 UN proper shipping name

ADR : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADR : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.4 Packing group

ADR : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA (Cargo) : Not regulated as a dangerous good

IATA (Passenger) : Not regulated as a dangerous good

14.5 Environmental hazards

ADR : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA (Passenger) : Not regulated as a dangerous good

IATA (Cargo) : Not regulated as a dangerous good

14.6 Special precautions for user

No special precautions required.

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

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

: This product does not contain substances of very high concern (Regu-



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lation (EC) No 1907/2006 (REACH),

Article 57).

REACH - List of substances subject to authorisation :

(Annex XIV)

Not applicable

Regulation (EC) No 1005/2009 on substances that dep-

lete the ozone layer

Not applicable

Regulation (EC) No 850/2004 on persistent organic pol-

lutants

Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import

of dangerous chemicals

Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances,

preparations and articles (Annex XVII)

Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Not applicable

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial

emissions (integrated pollution prevention and control)

Remarks: Not applicable

15.2 Chemical safety assessment

This information is not available.

SECTION 16: Other information

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - In-

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ternational Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

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