- RU



## **OKS 450**

Version **Revision Date:** Date of last issue: 16.03.2022 Print Date: 19.04.2022 Date of first issue: 27.06.2014 19.04.2022 3.1

#### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : OKS 450

Manufacturer or supplier's details

Company name of supplier OKS Spezialschmierstoffe GmbH

Ganghoferstr. 47

D-82216 Maisach-Gernlinden Tel.: +49 8142 3051 500 Fax.: +49 8142 3051 599 info@oks-germany.com

E-mail address of person

mcm@oks-germany.com responsible for the SDS

Material Compliance Management

: +7 495 628 1687

Emergency telephone

number +49 8142 3051 517

Recommended use of the chemical and restrictions on use

Recommended use Lubricant

Restrictions on use Restricted to professional users.

### 2. HAZARDS IDENTIFICATION

GHS Classification (According to GOST 32423, GOST 32424 and GOST 32425)

Skin irritation Category 3

Eye irritation Category 2A

Skin sensitisation Category 1

**GHS-Labelling (According to GOST 31340)** 

Hazard pictograms

Signal word Warning

Hazard statements H316 Causes mild skin irritation.

> H317 May cause an allergic skin reaction. H319 Causes serious eye irritation.

Precautionary statements Prevention:

P261 Avoid breathing vapours.

- RU



**OKS 450** 

Version Revision Date: Date of last issue: 16.03.2022 Print Date: 3.1 19.04.2022 Date of first issue: 27.06.2014 19.04.2022

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ eye protection/ face protection.

Response:

P333 + P313 If skin irritation or rash occurs: Get medical

advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/

attention.

P362 + P364 Take off contaminated clothing and wash it before

reuse.

### Other hazards which do not result in classification

None known.

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical nature : Synthetic hydrocarbon oil

### Components

Chemical name	Concentration (% w/w)	Occupational Exposure Limits		CAS-No.	EC-No.
		MAC value mg/m3 / TSEL value	Hazard Class		
zinc bis[O,O-bis(2- ethylhexyl)] bis(dithiophosphate)	>= 1 - < 2,5	No data available		4259-15-8	224-235-5
Sulfonic acids, petroleum, calcium salts	>= 1 - < 10	No data available		61789-86-4	263-093-9
Molybdenum trioxide, reaction products with bis[O,O-bis(2- ethylhexyl)] hydrogen dithiophosphate	>= 1 - < 2,5	No data available			947-946-9

#### 4. FIRST AID MEASURES

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

medical attention.

Keep patient warm and at rest.

If unconscious, place in recovery position and seek medical

advice.

Keep respiratory tract clear.

If breathing is irregular or stopped, administer artificial

respiration.



- RU



**OKS 450** 

Version Revision Date: Date of last issue: 16.03.2022 Print Date: 3.1 19.04.2022 Date of first issue: 27.06.2014 19.04.2022

In case of skin contact : Take off all contaminated clothing immediately.

Wash off immediately with soap and plenty of water. Get medical attention immediately if irritation develops and

persists.

Wash clothing before reuse.

Thoroughly clean shoes before reuse.

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

for at least 10 minutes. Seek medical advice.

If swallowed : Move the victim to fresh air.

If unconscious, place in recovery position and seek medical

advice.

Keep respiratory tract clear. Do NOT induce vomiting. Rinse mouth with water.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and

delayed

May cause an allergic skin reaction.

Allergic appearance

Notes to physician : The first aid procedure should be established in consultation

with the doctor responsible for industrial medicine.

#### 5. FIREFIGHTING MEASURES

Flammable properties

Flash point : 210 °C

Method: ISO 2592

Ignition temperature : No data available

Upper explosion limit / Upper :

flammability limit

No data available

Lower explosion limit / Lower :

flammability limit

No data available

Flammability (solid, gas) : Not applicable

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

carbon dioxide.

Unsuitable extinguishing

media

High volume water jet

Hazardous combustion

products

Carbon oxides

Nitrogen oxides (NOx)

- RU



**OKS 450** 

Version **Revision Date:** Date of last issue: 16.03.2022 Print Date: 19.04.2022 Date of first issue: 27.06.2014 19.04.2022 3.1

> Sulphur oxides Oxides of phosphorus

Metal oxides

Further information Standard procedure for chemical fires.

Special protective equipment

for firefighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

Exposure to decomposition products may be a hazard to

health.

#### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Use personal protective equipment.

Ensure adequate ventilation.

Do not breathe vapours or spray mist.

Refer to protective measures listed in sections 7 and 8.

**Environmental precautions** 

Try to prevent the material from entering drains or water

courses.

Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages

cannot be contained.

Methods and materials for containment and cleaning up Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to

local / national regulations (see section 13).

#### 7. HANDLING AND STORAGE

Advice on safe handling Do not breathe vapours or spray mist.

Avoid contact with skin and eyes.

For personal protection see section 8.

Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is

being used.

Smoking, eating and drinking should be prohibited in the

application area.

Wash hands and face before breaks and immediately after

handling the product.

Do not get in eyes or mouth or on skin.

Do not get on skin or clothing.

Do not ingest. Do not repack.

Do not re-use empty containers.

These safety instructions also apply to empty packaging which

- RU



**OKS 450** 

Version Revision Date: Date of last issue: 16.03.2022 Print Date: 3.1 19.04.2022 Date of first issue: 27.06.2014 19.04.2022

may still contain product residues. Keep container closed when not in use.

Conditions for safe storage : 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.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : Maintain air concentrations below occupational exposure

standards.

#### Personal protective equipment

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

Filter type : Filter type A-P

Hand protection

Material : Nitrile rubber
Break through time : > 10 min
Protective index : Class 1

Remarks : Wear protective gloves. 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.

Eye protection : Safety glasses with side-shields

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 specific work-place.

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

handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- RU



**OKS 450** 

Version Revision Date: Date of last issue: 16.03.2022 Print Date: 3.1 19.04.2022 Date of first issue: 27.06.2014 19.04.2022

Appearance : liquid

Colour : green

Odour : characteristic

Odour Threshold : No data available

pH : Not applicable

substance/mixture is non-polar/aprotic

Melting point/range : No data available

Boiling point/boiling range : 235 °C

(1.013 hPa)

Flash point : 210 °C

Method: ISO 2592

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Self-ignition : not auto-flammable

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower :

flammability limit

No data available

Vapour pressure : 22,0 hPa (20 °C)

Relative vapour density : No data available

Relative density : 0,891 (20 °C)

Reference substance: Water The value is calculated

Density : 0,89 g/cm3 (20 °C)

Bulk density : No data available

Solubility(ies)

Water solubility : insoluble

- RU



**OKS 450** 

Version Revision Date: Date of last issue: 16.03.2022 Print Date: 3.1 19.04.2022 Date of first issue: 27.06.2014 19.04.2022

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 : 295 mm2/s (40 °C)

Explosive properties : Not explosive

Oxidizing properties : No data available

Sublimation point : No data available

Metal corrosion rate : Not corrosive to metals

## 10. STABILITY AND REACTIVITY

Reactivity : No hazards to be specially mentioned.

Chemical stability : Stable under normal conditions.

Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoid : No conditions to be specially mentioned.

Incompatible materials : No materials to be especially mentioned.

Hazardous decomposition

products

No decomposition if stored and applied as directed.

## 11. TOXICOLOGICAL INFORMATION

### **Acute toxicity**

**Product:** 

Acute oral toxicity : Acute toxicity estimate: > 5.000 mg/kg

Method: Calculation method

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

- RU



# **OKS 450**

Version Revision Date: Date of last issue: 16.03.2022 Print Date: 3.1 19.04.2022 Date of first issue: 27.06.2014 19.04.2022

Acute dermal toxicity : Symptoms: Redness, Local irritation

#### **Components:**

# zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Acute oral toxicity : LD50 (Rat, male): 3.100 mg/kg

Method: OECD Test Guideline 401

GLP: no

Acute dermal toxicity : LD50 (Rabbit, male): > 5.000 mg/kg

Method: OECD Test Guideline 402

GLP: no

# Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

Acute dermal toxicity : Symptoms: Redness, Local irritation

## Skin corrosion/irritation

**Product:** 

Remarks : This information is not available.

## **Components:**

# zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Species : Rabbit

Assessment : No skin irritation

Method : OECD Test Guideline 404

Result : No skin irritation

GLP : yes

# Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

Assessment : Irritating to skin. Result : Irritating to skin.

Remarks : Irritating to skin.

- RU



### **OKS 450**

Version Revision Date: Date of last issue: 16.03.2022 Print Date: 3.1 19.04.2022 Date of first issue: 27.06.2014 19.04.2022

# Serious eye damage/eye irritation

**Product:** 

Remarks : Irritating to eyes.

### **Components:**

## zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Species : Rabbit

Result : Risk of serious damage to eyes.
Assessment : Risk of serious damage to eyes.
Method : OECD Test Guideline 405

GLP : yes

# Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

Result : No eye irritation
Assessment : No eye irritation

## Respiratory or skin sensitisation

**Product:** 

Remarks : This information is not available.

## **Components:**

### zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Test Type : Maximisation Test

Species : Guinea pig

Assessment : Did not cause sensitisation on laboratory animals.

Method : OECD Test Guideline 406

Result : Did not cause sensitisation on laboratory animals.

GLP : yes

#### Sulfonic acids, petroleum, calcium salts:

Assessment : The product is a skin sensitiser, sub-category 1B.

# Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

Assessment : The product is a skin sensitiser, sub-category 1B. Result : The product is a skin sensitiser, sub-category 1B.



- RU



**OKS 450** 

Version Revision Date: Date of last issue: 16.03.2022 Print Date: 3.1 19.04.2022 Date of first issue: 27.06.2014 19.04.2022

# Germ cell mutagenicity

**Product:** 

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Carcinogenicity

**Product:** 

Remarks : No data available

Reproductive toxicity

**Product:** 

Effects on fertility : Remarks: No data available

Effects on foetal development

Remarks: No data available

Repeated dose toxicity

**Product:** 

Remarks : This information is not available.

# **Aspiration toxicity**

#### **Product:**

This information is not available.

### **Components:**

### zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

No aspiration toxicity classification

## **Further information**

**Product:** 

Remarks : Information given is based on data on the components and

the toxicology of similar products.

- RU



**OKS 450** 

VersionRevision Date:Date of last issue: 16.03.2022Print Date:3.119.04.2022Date of first issue: 27.06.201419.04.2022

#### Components:

Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

Remarks : Ingestion causes irritation of upper respiratory system and

gastrointestinal disturbance.

#### 12. ECOLOGICAL INFORMATION

**Ecotoxicity** 

**Product:** 

Toxicity to fish

Remarks: No data available

Toxicity to daphnia and other :

aquatic invertebrates

Remarks: No data available

Toxicity to algae/aquatic

plants

Remarks: No data available

Toxicity to microorganisms : Remarks: No data available

**Components:** 

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 4,4 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)): 75 mg/l

Exposure time: 48 h Test Type: Immobilization

Method: OECD Test Guideline 202

GLP: yes

Toxicity to algae/aquatic

plants

ErC50 (Desmodesmus subspicatus (green algae)): 240 mg/l

Exposure time: 72 h

Test Type: Growth inhibition

Method: OECD Test Guideline 201

GLP: yes

- RU



**OKS 450** 

Version **Revision Date:** Date of last issue: 16.03.2022 Print Date: 19.04.2022 Date of first issue: 27.06.2014 19.04.2022 3.1

Toxicity to daphnia and other :

aquatic invertebrates

(Chronic toxicity)

NOEC (Daphnia magna (Water flea)): > 0,8 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

GLP: yes

Remarks: Information given is based on data obtained from

similar substances.

Toxicity to microorganisms EC50 (Pseudomonas putida): 380 mg/l

Exposure time: 16 h Test Type: static test

GLP: yes

Molybdenum trioxide, reaction products with bis[0,0-bis(2-ethylhexyl)] hydrogen dithiophosphate:

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

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

Method: OECD Test Guideline 203

GLP: yes

Remarks: May cause long-term adverse effects in the aquatic

environment.

aquatic invertebrates

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h Test Type: static test

Method: OECD Test Guideline 202

GLP: yes

Toxicity to algae/aquatic

plants

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

Exposure time: 72 h Test Type: static test

Method: OECD Test Guideline 201

GLP: yes

#### Persistence and degradability

**Product:** 

Biodegradability Remarks: No data available

Physico-chemical Remarks: No data available

- RU



## **OKS 450**

Version Revision Date: Date of last issue: 16.03.2022 Print Date: 3.1 19.04.2022 Date of first issue: 27.06.2014 19.04.2022

# removability

## **Components:**

### zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Biodegradability : Result: Not rapidly biodegradable

Biodegradation: < 5 % Exposure time: 27 d

Method: OECD Test Guideline 301D

GLP: no

# Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

Biodegradability : Result: Not rapidly biodegradable

Biodegradation: 11 % Exposure time: 28 d

Method: OECD Test Guideline 301B

### Bioaccumulative potential

#### **Product:**

Bioaccumulation : Remarks: This mixture contains no substance considered to

be persistent, bioaccumulating and toxic (PBT).

This mixture contains no substance considered to be very

persistent and very bioaccumulating (vPvB).

## **Components:**

## zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Partition coefficient: n- : log Pow: 3,59 (22 °C)

octanol/water pH: 5

Method: OECD Test Guideline 107

GLP: yes

# Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

Partition coefficient: n-

log Pow: > 4

octanol/water

# Mobility in soil

### **Product:**

Mobility : Remarks: No data available

Distribution among : Remarks: No data available

environmental compartments

a brand of
FREUDENBERG

- RU



**OKS 450** 

Version Revision Date: Date of last issue: 16.03.2022 Print Date: 3.1 19.04.2022 Date of first issue: 27.06.2014 19.04.2022

#### Other adverse effects

**Product:** 

Additional ecological

information

No information on ecology is available.

# **Components:**

## zinc bis[0,0-bis(2-ethylhexyl)] bis(dithiophosphate):

Results of PBT and vPvB

assessment

Non-classified PBT substance Non-classified vPvB substance

# Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

Additional ecological

information

May cause long lasting harmful effects to aquatic life.

## Hygienic standards:

#### (Allowable concentration in air, water, including fishery waters, soil)

Components	Air	Water	Soil	Data Source
zinc bis[O,O-bis(2- ethylhexyl)] bis(dithiophosphate)	TSEL value: 0,05 mg/m3			

#### 13. DISPOSAL CONSIDERATIONS

# **Disposal methods**

Waste from residues : The product should not be allowed to enter drains, water

courses or the soil.

Do not dispose of with domestic refuse.

Dispose of as hazardous waste in compliance with local and

national regulations.

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:

Waste Code : unused product

13 02 06\*, synthetic engine, gear and lubricating oils

uncleaned packagings

15 01 10, packaging containing residues of or contaminated

- RU



#### **OKS 450**

Version Revision Date: Date of last issue: 16.03.2022 Print Date: 3.1 19.04.2022 Date of first issue: 27.06.2014 19.04.2022

by hazardous substances

#### 14. TRANSPORT INFORMATION

#### **ADR**

Not regulated as a dangerous good

#### **UNRTDG**

Not regulated as a dangerous good

#### IATA-DGR

Not regulated as a dangerous good

#### **IMDG-Code**

Not regulated as a dangerous good

# Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

#### 15. REGULATORY INFORMATION

#### **National regulatory information**

Federal Law of 10.01.2002 No. 184-FZ "On Technical Regulation".

Federal Law of 10.01.2002 No. 7-FZ "On Environmental Protection".

Federal Law of 21.07.1997 No. 116-FZ (amended on 11.06.2021) "On industrial safety of hazardous production facilities".

Federal Law of 24.06.1998 No. 89-FZ (amended on 02.07.2021) "On production and consumption waste".

Federal Law of 10.01.2002 No. 7-FZ (amended on 02.07.2021) "On environmental protection". Federal Law of 04.05.1999 No. 96-FZ "On the protection of atmospheric air" (as amended on December 8, 2020).

Federal Law of 30.03.1999 No. 52-FZ (amended on 02.07.2021) "On the Sanitary and Epidemiological Well-Being of the Population" (amended and supplemented, entered into force on 31.10.2021).

Federal Law of 27.12.2002 No. 184-FZ (amended on 02.07.2021) "On Technical Regulation" (amended and supplemented, entered into force on 01.09.2021).

TECHNICAL REGULATIONS OF THE CUSTOMS UNION TR CU 030/2012 On requirements for lubricants, oils and special fluids (amended on 03.03.2017).

#### **16. OTHER INFORMATION**

#### List of data sources used in the preparation of the Safety Data Sheet

GOST 30333-2007. Interstate standard. Safety data sheet for chemical products. Primary requirements.



- RU



#### **OKS 450**

Version Revision Date: Date of last issue: 16.03.2022 Print Date: 3.1 19.04.2022 Date of first issue: 27.06.2014 19.04.2022

GOST 12.1.007-76 Occupational safety standards system. Noxious substances. Classification and general safety requirements

GOST 12.1.044-89 Occupational safety standards system. Fire and explosion hazard of substances and materials. Nomenclature of indices and methods of their determination GOST 14192-96. Interstate standard. Cargo marking. Minsk, 1998.

GOST 31340-2013. Interstate standard. Precautionary labeling of chemical products. General requirements.

GOST 32419-2013 Classification of the hazard of chemical products. General requirements.

GOST 32421-2013 Classification of chemical products, the hazard of which is due to physical and chemical properties. Test methods for explosive chemical products.

GOST 32423-2013 Hazard classification of mixed chemical products by their effects on the body. GOST 32424-2013 Classification of the hazard of chemical products by their impact on the environment. Basic provisions.

GOST 32425-2013 Hazard classification of mixed chemical products in terms of environmental impact.

GOST R 53264-2009 Fire fighting equipment. Special protective clothing for firefighters. General technical requirements. Test methods.

GOST R 53265-2009 Fire fighting equipment. Personal protective equipment for the feet of the firefighter. General technical requirements. Test methods.

GOST R 53268-2009 Fire fighting equipment. Fire rescue belts. General technical requirements. Test methods.

GOST R 53269-2009 Fire fighting equipment. Firefighters helmets. General technical requirements. Test methods.

SanPiN 1.2.3685-21 "Hygienic standards and requirements for ensuring the safety and (or) harmlessness to humans of environmental factors" dated 28.01.2021.

SanPiN 2.1.3684-21 "Sanitary and epidemiological requirements for the maintenance of the territories of urban and rural settlements, for water bodies, drinking water and drinking water supply, atmospheric air, soils, living quarters, the operation of industrial, public premises, the organization and implementation of sanitary and anti-epidemic (preventive) measures".

European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). United Nations. New York and Geneva. 20.

International Maritime Dangerous Goods Code (IMDG-Code).

Water quality standards for fishery water bodies, including standards for maximum permissible concentrations of harmful substances in the waters of fishery water bodies (approved by order of the Ministry of Agriculture of Russia dated December 13, 2016 No. 552).

Regulations for the carriage of dangerous goods (Appendix 1 and 2) to the Agreement on International Goods Transport by Rail (SMGS), 2009.

UN Recommendations on the Transport of Dangerous Goods. Typical rules. Twenty-first revised edition. United Nations, New York and Geneva, 2019.

#### Full text of other abbreviations

Acute Tox. : Acute toxicity

Aquatic Acute : Short-term (acute) aquatic hazard
Aquatic Chronic : Long-term (chronic) aquatic hazard

Eye Dam. : Serious eye damage

Skin Irrit. : Skin irritation
Skin Sens. : Skin sensitisation

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with

- RU



**OKS 450** 

Version Revision Date: Date of last issue: 16.03.2022 Print Date: 3.1 19.04.2022 Date of first issue: 27.06.2014 19.04.2022

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 - International 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; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

This safety data sheet applies only to products as originally packed and labelled. The information contained therein may not be reproduced or modified without our express written permission. Any forwarding of this document is only permitted to the extent required by law. Any further, in particular public, dissemination of the safety data sheet (e.g., as a document for download from the Internet) is not permitted without our express written consent. We provide our customers with amended safety data sheets as prescribed by law. The customer is responsible for passing on safety data sheets and any amendments contained therein to its own customers, employees and other users of the product. We provide no guarantee that safety data sheets received by users from third parties are up-to-date. All information and instructions in this safety data sheet have been compiled to the best of our knowledge and are based on the information available to us on the day of publication. The information provided is intended to describe the product in relation to the required safety measures; it is neither an assurance of characteristics nor a guarantee of the product's suitability for particular applications and does not justify any contractual legal relationship. The existence of a safety data sheet for a particular jurisdiction does not necessarily mean that import or use within that jurisdiction is legally permitted. If you have any questions, please contact your responsible sales contact or authorized trading partner.