

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : OKS 221

Chemical nature : Active substance with propellant

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 responsible for the SDS : mcm@oks-germany.com
Material Compliance Management

National contact :

Emergency telephone number : +86 532 8388 9090 (NRCC, only for hazardous chemicals)
+86 21 69225521

Recommended use of the chemical and restrictions on use

Recommended use : Lubricant spray

Restrictions on use : Restricted to professional users.

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	: aerosol
Colour	: black
Odour	: characteristic

Extremely flammable aerosol. Pressurised container: May burst if heated. May be fatal if swallowed and enters airways. Causes mild skin irritation. Causes serious eye damage. May cause drowsiness or dizziness. Toxic to aquatic life with long lasting effects.

GHS Classification

Aerosols : Category 1

Skin irritation : Category 3

Serious eye damage : Category 1

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

Specific target organ toxicity - single exposure : Category 3 (Narcotic effects)

Aspiration hazard : Category 1

Short-term (acute) aquatic hazard : Category 2

Long-term (chronic) aquatic hazard : Category 2

GHS label elements

Hazard pictograms :     

Signal word : Danger

Hazard statements : H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H304 May be fatal if swallowed and enters airways.
H316 Causes mild skin irritation.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P210 Keep away from heat/ sparks/ open flames/ hot surfaces.
No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P261 Avoid breathing mist.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear eye protection/ face protection.
Response:
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P331 Do NOT induce vomiting.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Disposal:

P501 Dispose of contents/containers according the local government requirements.

Physical and chemical hazards

Extremely flammable aerosol. Pressurised container: May burst if heated.

Health hazards

Causes mild skin irritation. Causes serious eye damage. May cause drowsiness or dizziness. May be fatal if swallowed and enters airways.

Environmental hazards

Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Pentane	109-66-0	>= 30 -< 50
Butane	106-97-8	>= 10 -< 20
propane	74-98-6	>= 10 -< 20
molybdenum disulphide	1317-33-5	>= 1 -< 10
calcium dihydroxide	1305-62-0	>= 3 -< 10
Isobutane	75-28-5	>= 1 -< 10
Natural graphite	7782-42-5	>= 1 -< 10

4. FIRST AID MEASURES

If inhaled : Call a physician or poison control centre immediately.
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.

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

- Keep respiratory tract clear.
If breathing is irregular or stopped, administer artificial respiration.
- In case of skin contact : Take off all contaminated clothing immediately.
Get medical attention immediately if irritation develops and persists.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
Wash skin thoroughly with soap and water or use recognized skin cleanser.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes.
Get medical attention immediately.
- If swallowed : Move the victim to fresh air.
If accidentally swallowed obtain immediate medical attention.
Keep respiratory tract clear.
Do NOT induce vomiting.
Rinse mouth with water.
Aspiration hazard if swallowed - can enter lungs and cause damage.
- Most important symptoms and effects, both acute and delayed : Central nervous system depression
Can be absorbed through skin.
Risk of product entering the lungs on vomiting after ingestion.
Health injuries may be delayed.
Inhalation may provoke the following symptoms:
Unconsciousness
Dizziness
Drowsiness
Headache
Nausea
Tiredness
Skin contact may provoke the following symptoms:
Erythema
Aspiration may cause pulmonary oedema and pneumonitis.
- Notes to physician : Treat symptomatically.

5. FIREFIGHTING MEASURES

- Suitable extinguishing media : ABC powder
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Fire Hazard
Do not let product enter drains.

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

Contains gas under pressure; may explode if heated.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

- Hazardous combustion products : Carbon oxides
Sulphur oxides
Metal oxides
- Specific extinguishing methods : Standard procedure for chemical fires.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Cool containers/tanks with water spray.
- 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.
Ensure adequate ventilation.
Remove all sources of ignition.
Do not breathe vapours or spray mist.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not allow contact with soil, surface or ground water.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- 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).
Keep in suitable, closed containers for disposal.
Non-sparking tools should be used.
- Prevention of secondary hazards : Only qualified personnel equipped with suitable protective equipment may intervene.

7. HANDLING AND STORAGE

Handling

- Advice on safe handling : Do not use in areas without adequate ventilation.
Do not breathe vapours or spray mist.

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

In case of insufficient ventilation, wear suitable respiratory equipment.
Avoid contact with skin and eyes.
For personal protection see section 8.
Keep away from fire, sparks and heated surfaces.
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 use sparking tools.
These safety instructions also apply to empty packaging which may still contain product residues.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.

Avoidance of contact : Oxidizing agents

Storage

Conditions for safe storage : BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.
Store in accordance with the particular national regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Pentane	109-66-0	PC-TWA	500 mg/m ³	CN OEL (2019-08-27)
		PC-STEL	1,000 mg/m ³	CN OEL (2019-08-27)
		TWA	1,000 ppm	ACGIH (2014-03-01)
Butane	106-97-8	STEL	1,000 ppm	ACGIH (2018-03-20)
molybdenum disulphide	1317-33-5	PC-TWA	6 mg/m ³ (Molybdenum)	CN OEL (2019-08-27)
		TWA (Inhalable particulate)	10 mg/m ³ (Molybdenum)	ACGIH (2019-03-05)

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

		matter)		
		TWA (Respirable particulate matter)	3 mg/m3 (Molybdenum)	ACGIH (2019-03-05)
calcium dihydroxide	1305-62-0	TWA	5 mg/m3	ACGIH (2013-03-01)
Isobutane	75-28-5	STEL	1,000 ppm	ACGIH (2018-03-20)
Natural graphite	7782-42-5	PC-TWA (Total dust)	4 mg/m3	CN OEL (2019-08-27)
		PC-TWA (Respirable dust)	2 mg/m3	CN OEL (2019-08-27)
		TWA (Respirable particulate matter)	2 mg/m3	ACGIH (2007-01-01)

Engineering measures : Use only in an area equipped with explosion proof exhaust ventilation.
Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type : Recommended Filter type:
Organic gas and low boiling vapour type

Eye/face protection : Tightly fitting safety goggles

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Hand protection
Material : Fluorinated 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.

Protective measures : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

at the specific workplace.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : aerosol

Colour : black

Odour : characteristic

Odour Threshold : No data available

pH : Not applicable
substance/mixture is non-soluble (in water)

Melting point/range : No data available

Boiling point/boiling range : -161 °C
(1,013 hPa)

Flash point : -60 °C
Method: Abel-Pensky

Evaporation rate : No data available

Flammability (solid, gas) : Extremely flammable aerosol.

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : 10.9 %(V)

Lower explosion limit / Lower flammability limit : 1.4 %(V)

Vapour pressure : 3,700 hPa (20 °C)

Relative vapour density : No data available

Relative density : 0.675 (20 °C)

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

	Reference substance: Water
	The value is calculated
Density	: 0.68 g/cm ³ (20 °C)
Bulk density	: No data available
Solubility(ies)	
Water solubility	: insoluble
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	: < 20.5 mm ² /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	: Heat, flames and sparks. Strong sunlight for prolonged periods. Risk of receptacle bursting.
Incompatible materials	: Oxidizing agents
Hazardous decomposition products	: No decomposition if stored and applied as directed.

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Remarks: Effects due to ingestion may include:

Symptoms: Central nervous system depression

Acute inhalation toxicity : Remarks: Respiration of solvent vapour may cause dizziness.

Symptoms: Inhalation may provoke the following symptoms:,
Respiratory disorder, Dizziness, Drowsiness, Vomiting,
Fatigue, Vertigo, Central nervous system depression

Acute toxicity estimate: > 10 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity : Remarks: Prolonged or repeated skin contact with liquid may
cause defatting resulting in drying, redness and possible
blistering.

Symptoms: Skin disorders

Components:

Pentane:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 25.3 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Assessment: The substance or mixture has no acute
inhalation toxicity

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

Butane:

Acute inhalation toxicity : LC50 (Rat): 658 mg/l
Exposure time: 4 h
Test atmosphere: gas

molybdenum disulphide:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 (Rat): > 16,000 mg/kg

calcium dihydroxide:

Acute oral toxicity : LD50 (Rat, female): > 2,000 mg/kg
Method: OECD Test Guideline 425
GLP: yes
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat, male and female): > 6.04 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436
GLP: yes

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,500 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Isobutane:

Acute inhalation toxicity : LC50 (Rat): 658 mg/l
Exposure time: 4 h
Test atmosphere: gas

Natural graphite:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

Skin corrosion/irritation

Product:

Remarks : This information is not available.

Components:

Pentane:

Result : Repeated exposure may cause skin dryness or cracking.

molybdenum disulphide:

Assessment : No skin irritation
Result : No skin irritation

calcium dihydroxide:

Species : human skin
Assessment : Irritating to skin.
Method : OECD Test Guideline 431
Result : Irritating to skin.
GLP : yes

Species : Rabbit
Assessment : Irritating to skin.
Method : OECD Test Guideline 404
Result : Irritating to skin.
GLP : yes

Serious eye damage/eye irritation

Product:

Remarks : Risk of serious damage to eyes.

Components:

Pentane:

Species : Rabbit
Result : No eye irritation
Assessment : No eye irritation

molybdenum disulphide:

Result : No eye irritation

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

Assessment : No eye irritation

calcium dihydroxide:

Species : Rabbit
Result : Risk of serious damage to eyes.
Assessment : Risk of serious damage to eyes.
Method : OECD Test Guideline 405
GLP : yes

Respiratory or skin sensitisation

Product:

Remarks : This information is not available.

Components:

Pentane:

Species : Guinea pig
Assessment : Does not cause skin sensitisation.
Method : OECD Test Guideline 406
Result : Does not cause skin sensitisation.
GLP : yes

molybdenum disulphide:

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

calcium dihydroxide:

Test Type : Local lymph node assay (LLNA)
Species : Mouse
Assessment : Does not cause skin sensitisation.
Method : OECD Test Guideline 429
Result : Does not cause skin sensitisation.
GLP : yes

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

Components:

molybdenum disulphide:

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

calcium dihydroxide:

Genotoxicity in vitro : Test Type: Ames test
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative
GLP: yes

Carcinogenicity

Product:

Remarks : No data available

Components:

molybdenum disulphide:

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

calcium dihydroxide:

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

Effects on foetal development : Remarks: No data available

Components:

calcium dihydroxide:

Reproductive toxicity - Assessment : - Fertility -
No toxicity to reproduction
- Teratogenicity -
No effects on or via lactation

STOT - single exposure

Components:

Pentane:

Exposure routes : Inhalation
Target Organs : Central nervous system, Narcotic effects
Assessment : May cause drowsiness or dizziness.
The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

molybdenum disulphide:

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

calcium dihydroxide:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Components:

molybdenum disulphide:

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.

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

Aspiration toxicity

Product:

May be fatal if swallowed and enters airways.

May be fatal if swallowed and enters airways.

Components:

Pentane:

May be fatal if swallowed and enters airways.

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.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish :
Remarks: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Toxicity to daphnia and other aquatic invertebrates :
Remarks: No data available

Toxicity to algae/aquatic plants :
Remarks: No data available

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

Toxicity to microorganisms : Remarks: No data available

Components:

Pentane:

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

molybdenum disulphide:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h

calcium dihydroxide:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 50.6 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 49.1 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)): 184.57 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Physico-chemical
removability : Remarks: No data available

Components:

Pentane:

Biodegradability : aerobic
Inoculum: activated sludge
Result: rapidly biodegradable
Biodegradation: 87 %
Method: OECD Test Guideline 301F
GLP: yes

calcium dihydroxide:

Biodegradability : Remarks: The methods for determining the biological
degradability are not applicable to inorganic substances.

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:

Butane:

Partition coefficient: n-
octanol/water : log Pow: 2.89
Method: OECD Test Guideline 107

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

propane:

Partition coefficient: n-octanol/water : log Pow: 2.36

Isobutane:

Partition coefficient: n-octanol/water : log Pow: 2.88
Method: OECD Test Guideline 107

Natural graphite:

Partition coefficient: n-octanol/water : Remarks: No data available

Mobility in soil

Product:

Mobility : Remarks: No data available

Distribution among environmental compartments : Remarks: No data available

Other adverse effects

Product:

Additional ecological information : Toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : 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.
Offer empty spray cans to an established disposal company.
Pressurized container: Do not pierce or burn, even after use.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

UN number : UN 1950
Proper shipping name : AEROSOLS
Class : 2.1
Packing group : Not assigned by regulation
Labels : 2.1

IATA-DGR

UN/ID No. : UN 1950
Proper shipping name : Aerosols, flammable
Class : 2.1
Packing group : Not assigned by regulation
Labels : Flammable Gas
Packing instruction (cargo aircraft) : 203
Packing instruction (passenger aircraft) : 203

IMDG-Code

UN number : UN 1950
Proper shipping name : AEROSOLS
(pentane)
Class : 2.1
Packing group : Not assigned by regulation
Labels : 2.1
EmS Code : F-D, S-U
Marine pollutant : yes

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

Not applicable for product as supplied.

National Regulations

GB 6944/12268

UN number : UN 1950
Proper shipping name : AEROSOLS
Class : 2.1
Packing group : Not assigned by regulation
Labels : 2.1

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15. REGULATORY INFORMATION

National regulatory information

Law on the Prevention and Control of Occupational Diseases

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals

Product name		Status	Reference number
OKS 221		Listed	2828

List of ingredients	CAS-No.	Status	Reference number
Pentane	109-66-0	Listed	2796
Butane	106-97-8	Listed	2778
propane	74-98-6	Listed	139
Isobutane	75-28-5	Listed	2707

Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)

Category Threshold quantity
Aerosols 150 t

Hazardous Chemicals for Priority Management under SAWS : Not applicable

Regulations on Labour Protection in Workplaces where Toxic Substances are Used

Catalogue of Highly Toxic Chemicals : Not applicable

Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

China Severely Restricted Toxic Chemicals for Import and Export : Not applicable

International Regulations

Montreal Protocol : Not applicable

Rotterdam Convention (Prior Informed Consent) : Not applicable

Stockholm Convention (Persistent Organic Pollutants) : Not applicable

The components of this product are reported in the following inventories:

IECSC : On the inventory, or in compliance with the inventory

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version 2.1 Revision Date: 2022-08-18 Date of last issue: 2018-08-13
Date of first issue: 2014-03-20 Print Date: 2022-08-18

16. OTHER INFORMATION

Date format : yyyy/mm/dd

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
CN OEL : Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.

ACGIH / TWA : 8-hour, time-weighted average
ACGIH / STEL : Short-term exposure limit
CN OEL / PC-TWA : Permissible concentration - time weighted average
CN OEL / PC-STEEL : Permissible concentration - short term exposure limit

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; 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 x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECL - 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; WHMIS - Workplace Hazardous Materials Information System

Disclaimer

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

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519
CN



OKS 221

Version	Revision Date:	Date of last issue: 2018-08-13
2.1	2022-08-18	Date of first issue: 2014-03-20 Print Date: 2022-08-18

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.