OKS 571

Version	Revision Date:	Date of last issue: 2018-07-24	
1.6	2022-07-11	Date of first issue: 2014-03-28	Print Date: 2022-07-11

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : OKS 571

Chemical nature : Active substance with propellant
Solvent
PTFE
Silicone resin

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	:	white
Odour	:	solvent-like

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

GHS Classification

Aerosols : Category 1

Skin irritation	:	Category 2
Eye irritation	:	Category 2A
Specific target organ toxicity - single exposure	:	Category 3 (Narcotic effects)
Aspiration hazard	:	Category 1
Short-term (acute) aquatic hazard	:	Category 3
Long-term (chronic) aquatic hazard	:	Category 3

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.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H412 Harmful 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.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P302 + P352 IF ON SKIN: Wash with plenty of water.
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 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331 Do NOT induce vomiting.
P332 + P313 If skin irritation 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.

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

Environmental hazards

Harmful to aquatic life. Harmful 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)
Dimethyl ether	115-10-6	>= 50 -< 70
Naphtha (petroleum), hydrotreated light	64742-49-0	>= 10 -< 20
butanone	78-93-3	>= 1 -< 10
Acetone	67-64-1	>= 1 -< 10

Ethyl acetate	141-78-6	>= 1 -< 10
xylene	1330-20-7	>= 1 -< 2.5
n-hexane	110-54-3	>= 0.25 -< 1

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.
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 off immediately with plenty of water.

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 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
Risk of product entering the lungs on vomiting after ingestion.
Health injuries may be delayed.
Causes skin irritation.
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 fire-fighting	:	Fire Hazard Do not let product enter drains. 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 Halogenated compounds 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, ver-

miculite) 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.
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 parame-ters / Permissible concentration	Basis
butanone	78-93-3	PC-TWA	300 mg/m3	CN OEL (2019-08-27)
		PC-STEL	600 mg/m3	CN OEL (2019-08-27)
		TWA	200 ppm	ACGIH (2013-03-01)
		STEL	300 ppm	ACGIH (2013-03-01)
Acetone	67-64-1	PC-TWA	300 mg/m3	CN OEL (2019-08-27)
		PC-STEL	450 mg/m3	CN OEL (2019-08-27)
		TWA	250 ppm	ACGIH (2021-01-01)
		STEL	500 ppm	ACGIH (2021-01-01)
Ethyl acetate	141-78-6	PC-TWA	200 mg/m3	CN OEL (2019-08-27)
		PC-STEL	300 mg/m3	CN OEL (2019-08-27)
		TWA	400 ppm	ACGIH (2013-03-01)
xylene	1330-20-7	PC-TWA	50 mg/m3	CN OEL (2019-08-27)
		PC-STEL	100 mg/m3	CN OEL (2019-08-27)
		TWA	100 ppm	ACGIH (2021-01-01)
		STEL	150 ppm	ACGIH (2021-01-01)
n-hexane	110-54-3	PC-TWA	100 mg/m3	CN OEL (2019-08-27)
	Further information: Skin			
		PC-STEL	180 mg/m3	CN OEL (2019-08-27)
	Further information: Skin			
		TWA	50 ppm	ACGIH (2007-01-01)

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sam-pling time	Permissible concentra-tion	Basis
butanone	78-93-3	methyl ethyl ketone	Urine	End of shift (As	2 mg/l	ACGIH BEI

				soon as possible after exposure ceases)		(2014-03-01)
Acetone	67-64-1	Acetone	Urine	End of shift	50 mg/l	CN BEI (2019-08-27)
		Acetone	Urine	End of shift (As soon as possible after exposure ceases)	25 mg/l	ACGIH BEI (2017-03-01)
xylene	1330-20-7	methylhip-puric acids	Urine	End of shift	0.3 g/g cre-atinine	CN BEI (2019-08-27)
		methylhip-puric acids	Urine	End of shift	0.4 g/l	CN BEI (2019-08-27)
		Methylhip-puric acids	Urine	End of shift (As soon as possible after exposure ceases)	1.5 g/g cre-atinine	ACGIH BEI (2013-03-01)
n-hexane	110-54-3	2,5-hexanedi-one	Urine	After shift	4 mg/l	CN BEI (2019-08-27)
		2,5-hexanedi-one	Urine	After shift	35 micromol per litre	CN BEI (2019-08-27)
		2,5-Hexanedi-one	Urine	End of shift	0.5 mg/l	ACGIH BEI (2020-02-01)

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	:	Safety glasses with side-shields
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	:	butyl-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 at the specific workplace.
Hygiene measures	:	Wash face, hands and any exposed skin thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	aerosol
Colour	:	white
Odour	:	solvent-like
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	:	< -20 °C (1,013 hPa)
Flash point	:	-20 °C Method: Abel-Pensky
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Extremely flammable aerosol.
Self-ignition	:	not auto-flammable
Upper explosion limit / Upper flammability limit	:	26.2 %(V)
Lower explosion limit / Lower flammability limit	:	1.4 %(V)
Vapour pressure	:	4,400 hPa (20 °C)
Relative vapour density	:	No data available
Relative density	:	0.738 (20 °C) Reference substance: Water The value is calculated
Density	:	0.74 g/cm3 (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 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	:	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.

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	:	Acute toxicity estimate: > 40 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
		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 dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Symptoms: Redness, Local irritation

Components:

Dimethyl ether:

Acute inhalation toxicity : LC50 (Rat): 309 mg/l
Exposure time: 4 h
Test atmosphere: gas

Naphtha (petroleum), hydrotreated light:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute inhalation toxicity : LC50 (Rat): > 25.2 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity

butanone:

Acute oral toxicity : LD50 (Rat): 2,193 mg/kg
Method: OECD Test Guideline 423
GLP: yes

Acute inhalation toxicity	:	LC50 (Rat): 34 mg/l Exposure time: 4 h Test atmosphere: vapour
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg Method: OECD Test Guideline 402

Acetone:

Acute oral toxicity	:	LD50 Oral (Rat): 5,800 mg/kg

Ethyl acetate:

Acute oral toxicity	:	LD50 (Rat): 5,620 mg/kg
Acute dermal toxicity	:	LD50 (Rabbit): > 20,000 mg/kg

xylene:

Acute oral toxicity	:	LD50 (Rat): 4,300 mg/kg
Acute inhalation toxicity	:	Assessment: The component/mixture is moderately toxic after short term inhalation.
Acute dermal toxicity	:	Assessment: The component/mixture is moderately toxic after single contact with skin.

n-hexane:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50 (Rat): 259.35 mg/l Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403
Acute dermal toxicity	:	LD50 (Rabbit): 3,350 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Product:

Remarks : Irritating to skin.

Components:

Dimethyl ether:

Assessment : No skin irritation
Result : No skin irritation

Naphtha (petroleum), hydrotreated light:

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

butanone:

Species : Rabbit
Assessment : No skin irritation
Method : OECD Test Guideline 404
Result : No skin irritation

Result : Repeated exposure may cause skin dryness or cracking.

Ethyl acetate:

Species : Rabbit
Result : Mild skin irritation

Result : Repeated exposure may cause skin dryness or cracking.

xylene:

Species : Rabbit
Assessment : Irritating to skin.
Result : Irritating to skin.

n-hexane:

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

Serious eye damage/eye irritation

Product:

Remarks	:	Irritating to eyes.

Components:

Dimethyl ether:

Result	:	No eye irritation
Assessment	:	No eye irritation

Naphtha (petroleum), hydrotreated light:

Species	:	Rabbit
Result	:	No eye irritation
Assessment	:	No eye irritation
Method	:	OECD Test Guideline 405
GLP	:	yes

butanone:

Species	:	Rabbit
Result	:	Irritating to eyes.
Assessment	:	Irritating to eyes.
Method	:	OECD Test Guideline 405

Acetone:

Species	:	Rabbit
Result	:	Eye irritation

Ethyl acetate:

Result	:	Irritating to eyes.
Assessment	:	Irritating to eyes.

xylene:

Species	:	Rabbit
Result	:	Irritating to eyes.
Assessment	:	Irritating to eyes.

n-hexane:

Species	:	Rabbit
Result	:	No eye irritation
Assessment	:	No eye irritation
Method	:	OECD Test Guideline 405

Respiratory or skin sensitisation

Product:

Remarks	:	This information is not available.

Components:

Dimethyl ether:

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

Naphtha (petroleum), hydrotreated light:

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

butanone:

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

Ethyl acetate:

Test Type	:	Maximisation Test
Exposure routes	:	Dermal
Species	:	Guinea pig
Assessment	:	Does not cause skin sensitisation.
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitisation.

xylene:

Species	:	Mouse
Assessment	:	Did not cause sensitisation on laboratory animals.
Method	:	OECD Test Guideline 429
Result	:	Did not cause sensitisation on laboratory animals.

n-hexane:

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

Germ cell mutagenicity

Product:

Genotoxicity in vitro	:	Remarks: No data available
Genotoxicity in vivo	:	Remarks: No data available

Components:

Dimethyl ether:

Genotoxicity in vitro	:	Test Type: Ames test Method: OECD Test Guideline 471 Result: negative
Genotoxicity in vivo	:	Species: Drosophila melanogaster (vinegar fly) Application Route: inhalation (gas) Method: OECD Test Guideline 477 Result: negative

butanone:

Germ cell mutagenicity - Assessment	:	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

xylene:

Germ cell mutagenicity - Assessment	:	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

Product:

Remarks	:	No data available

Components:

Dimethyl ether:

Species	:	Rat
Application Route	:	inhalation (gas)
Exposure time	:	2 Years
	:	47 mg/l
Method	:	OECD Test Guideline 453
Result	:	negative

butanone:

Carcinogenicity - Assessment	:	Not classifiable as a human carcinogen.

xylene:

Carcinogenicity - Assessment	:	Not classifiable as a human carcinogen.

Reproductive toxicity

Product:

Effects on fertility	:	Remarks: No data available
Effects on foetal development	:	Remarks: No data available

Components:

Dimethyl ether:

Reproductive toxicity - Assessment	:	- Fertility - Animal testing did not show any effects on fertility.

butanone:

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

xylene:

Reproductive toxicity - Assessment	:	- Fertility - No toxicity to reproduction - Teratogenicity - No toxicity to reproduction

n-hexane:

Reproductive toxicity - Assessment	:	- Fertility - Suspected human reproductive toxicant

STOT - single exposure

Components:

Naphtha (petroleum), hydrotreated light:

Exposure routes	:	Inhalation
Target Organs	:	Central nervous system
Assessment	:	May cause drowsiness or dizziness.

butanone:

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

Acetone:

Exposure routes	:	Inhalation

Assessment : May cause drowsiness or dizziness.

Ethyl acetate:

Exposure routes : Inhalation
Target Organs : Respiratory system
Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

xylene:

Exposure routes : Inhalation
Target Organs : Respiratory system
Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

n-hexane:

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

STOT - repeated exposure

Components:

butanone:

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

Ethyl acetate:

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

xylene:

Exposure routes : Inhalation
Target Organs : Central nervous system
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Exposure routes	:	Ingestion
Target Organs	:	Liver, Kidney
Assessment	:	The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

n-hexane:

Exposure routes	:	Inhalation
Target Organs	:	Central nervous system
Assessment	:	The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Repeated dose toxicity

Product:

Remarks : This information is not available.

Aspiration toxicity

Product:

May be fatal if swallowed and enters airways.

May be fatal if swallowed and enters airways.

Components:

Dimethyl ether:

No aspiration toxicity classification

Naphtha (petroleum), hydrotreated light:

May be fatal if swallowed and enters airways.

butanone:

No aspiration toxicity classification

xylene:

May be fatal if swallowed and enters airways.

n-hexane:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks	:	Ingestion causes irritation of upper respiratory system and gastrointestinal disturbance.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish	:	Remarks: Harmful 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
Toxicity to microorganisms	:	Remarks: No data available

Components:

Dimethyl ether:

Toxicity to fish	:	LC50 (Poecilia reticulata (guppy)): > 4,100 mg/l Exposure time: 96 h Test Type: semi-static test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 4,400 mg/l Exposure time: 48 h Test Type: static test

Toxicity to algae/aquatic plants	:	EC50 (green algae): 154.9 mg/l Exposure time: 96 h

Naphtha (petroleum), hydrotreated light:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 10 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)): 4.5 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 3.1 mg/l Exposure time: 72 h Test Type: static test

Ecotoxicology Assessment

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

butanone:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 2,993 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 308 mg/l Exposure time: 48 h Test Type: static test
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 1,972 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes

Toxicity to microorganisms	:	EC50 (Pseudomonas putida): 1,150 mg/l Exposure time: 16 h Test Type: static test Method: DIN 38 412 Part 8

Ethyl acetate:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 212.5 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 154 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 2,500 mg/l Exposure time: 96 h

xylene:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 2.6 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 3.82 mg/l Exposure time: 48 h Test Type: flow-through test
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 2.2 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes
Toxicity to fish (Chronic toxicity)	:	NOEC (Oncorhynchus mykiss (rainbow trout)): > 1.3 mg/l Exposure time: 56 d Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EC50 (Daphnia magna (Water flea)): 2.90 mg/l Exposure time: 21 d Test Type: static test Method: OECD Test Guideline 211 GLP: yes
Toxicity to microorganisms	:	EC50 (activated sludge): > 157 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209

n-hexane:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 12.51 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 21.85 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 9.285 mg/l Exposure time: 72 h

Persistence and degradability

Product:

Biodegradability	:	Remarks: No data available
Physico-chemical removability	:	Remarks: No data available

Components:

Dimethyl ether:

Biodegradability	:	aerobic Inoculum: activated sludge Result: Not readily biodegradable. Biodegradation: 5 % Exposure time: 28 d Method: OECD Test Guideline 301D

Naphtha (petroleum), hydrotreated light:

Biodegradability : aerobic
Inoculum: activated sludge
Result: rapidly biodegradable
Biodegradation: 90.35 %
Exposure time: 28 d

butanone:

Biodegradability : aerobic
Inoculum: activated sludge
Result: rapidly biodegradable
Biodegradation: 98 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
GLP: yes

Acetone:

Biodegradability : Result: rapidly biodegradable

Ethyl acetate:

Biodegradability : Result: rapidly biodegradable

xylene:

Biodegradability : Result: Readily biodegradable.

n-hexane:

Biodegradability : aerobic
Inoculum: activated sludge
Result: rapidly biodegradable
Biodegradation: 21 %
Exposure time: 28 d
GLP: yes

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:

Dimethyl ether:

Partition coefficient: n-octanol/water	:	log Pow: 0.07 (25 °C)

Naphtha (petroleum), hydrotreated light:

Partition coefficient: n-octanol/water	:	log Pow: 3.4 - 5.2

butanone:

Bioaccumulation	:	Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.
Partition coefficient: n-octanol/water	:	log Pow: 0.3 (40 °C) Method: OECD Test Guideline 117 GLP: yes

Acetone:

Bioaccumulation	:	Remarks: Does not bioaccumulate.
Partition coefficient: n-octanol/water	:	log Pow: 0.2

Ethyl acetate:

Partition coefficient: n-octanol/water	:	log Pow: 0.68 (25 °C)

xylene:

Bioaccumulation	:	Bioconcentration factor (BCF): 25.9
Partition coefficient: n-octanol/water	:	log Pow: 2.77 - 3.15

n-hexane:

Bioaccumulation	:	Bioconcentration factor (BCF): 501.19

Partition coefficient: n-octanol/water	:	log Pow: 4 (20 °C) pH: 7

Mobility in soil

Product:

Mobility	:	Remarks: No data available
Distribution among environmental compartments	:	Remarks: No data available

Other adverse effects

Product:

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

Components:

Dimethyl ether:

Results of PBT and vPvB assessment	:	Non-classified vPvB substance Non-classified PBT substance

butanone:

Results of PBT and vPvB assessment	:	Non-classified PBT substance Non-classified vPvB substance

xylene:

Results of PBT and vPvB assessment	:	Non-classified PBT substance Non-classified vPvB substance

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

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
Class	:	2.1
Packing group	:	Not assigned by regulation
Labels	:	2.1
EmS Code	:	F-D, S-U
Marine pollutant	:	no

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

Regulations on Safety Management of Hazardous Chemicals

Hazardous Chemicals for Priority Management under SAWS : Not applicable

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

Catalogue of Hazardous Chemicals : Listed

Product name		Status	Reference number
OKS 571		Listed	2828

List of ingredients	CAS-No.	Status	Reference number
Dimethyl ether	115-10-6	Listed	479
butanone	78-93-3	Listed	236
Acetone	67-64-1	Listed	137
xylene	1330-20-7	Listed	358
n-hexane	110-54-3	Listed	2789
2-methylpropan-1-ol	78-83-1	Listed	1033

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

No. / Code	Chemical name / Category	Threshold quantity
W3	Aerosols	150 t

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

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

16. OTHER INFORMATION

Date format : yyyy/mm/dd

OKS 571

Version	Revision Date:	Date of last issue: 2018-07-24	
1.6	2022-07-11	Date of first issue: 2014-03-28	Print Date: 2022-07-11

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	:	ACGIH - Biological Exposure Indices (BEI)
CN BEI	:	China. Biological Occupational Exposure Indices
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-STEL	:	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; 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; WHMIS - Workplace Hazardous Materials Information System

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