according to GB/T 16483 and GB/T 17519



OKS 241 防卡膏 (铜膏),喷剂

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : OKS 241 防卡膏 (铜膏),喷剂

Chemical nature Active substance with propellant

Solvent mixture

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

National contact

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

mcm@oks-germany.com

+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 red brown Odour solvent-like

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

GHS Classification

Aerosols : Category 1

Skin irritation Category 2

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

single exposure



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Aspiration hazard Category 1

Short-term (acute) aquatic

hazard

Category 1

Long-term (chronic) aquatic

hazard

Category 1

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.

H336 May cause drowsiness or dizziness.

H410 Very 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.

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.

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.

P331 Do NOT induce vomiting.

P332 + P313 If skin irritation occurs: Get medical advice/

P362 + P364 Take off contaminated clothing and wash it before

reuse.

Storage:

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



according to GB/T 16483 and GB/T 17519



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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. May cause drowsiness or dizziness. May be fatal if swallowed and enters airways.

Environmental hazards

Very toxic to aquatic life. Very 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)
Dimethyl ether	115-10-6	>= 30 -< 50
Naphtha (petroleum), hydrotreated light	64742-49-0	>= 25 -< 30
copper	7440-50-8	>= 2.5 -< 10
n-Butyl acetate	123-86-4	>= 2.5 -< 10
n-hexane	110-54-3	>= 1 -< 2.5

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.



according to GB/T 16483 and GB/T 17519



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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.

If eye irritation persists, consult a specialist.

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

Aspiration may cause pulmonary oedema and pneumonitis.

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

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.

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

Hazardous combustion : Carbon oxides

according to GB/T 16483 and GB/T 17519



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products Nitrogen oxides (NOx)

Sulphur oxides

Oxides of phosphorus

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.

In case of insufficient ventilation, wear suitable respiratory

equipment.



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



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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
copper	7440-50-8	PC-TWA (Dust)	1 mg/m3 (Copper)	CN OEL (2019-08-27)
		PC-TWA (Fumes)	0.2 mg/m3 (Copper)	CN OEL (2019-08-27)
		TWA (Dust and mist)	1 mg/m3 (Copper)	ACGIH (2010-03-01)
		TWA (Fumes)	0.2 mg/m3 (Copper)	ACGIH (2010-03-01)
n-Butyl acetate	123-86-4	PC-TWA	200 mg/m3	CN OEL (2019-08-27)
		PC-STEL	300 mg/m3	CN OEL (2019-08-27)
		TWA	50 ppm	ACGIH (2017-03-01)

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		STEL	150 ppm	ACGIH (2017-03-01)
Tin	7440-31-5	TWA	2 mg/m3	ACGIH (2013-03-01)
		TWA (Inhalable particulate matter)	2 mg/m3 (Tin)	ACGIH (2021-01-01)
molybdenum disulphide	1317-33-5	PC-TWA	6 mg/m3 (Molybdenum)	CN OEL (2019-08-27)
		TWA (Inhalable particulate matter)	10 mg/m3 (Molybdenum)	ACGIH (2019-03-05)
		TWA (Respirable particulate matter)	3 mg/m3 (Molybdenum)	ACGIH (2019-03-05)
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	Samplin g time	Permissible concentratio n	Basis
n-hexane	110-54-3	2,5- hexanedion e	Urine	After shift	4 mg/l	CN BEI (2019-08- 27)
		2,5- hexanedion e	Urine	After shift	35 micromol per litre	CN BEI (2019-08- 27)
		2,5- Hexanedion e	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



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that exposures are within recommended exposure guidelines.

Short term only

Filter type : Filter type A-P

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 : red brown

Odour : solvent-like

Odour Threshold : No data available

pH : Not applicable

substance/mixture is non-soluble (in water)

Melting point/range : No data available

according to GB/T 16483 and GB/T 17519



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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 : No data available

Upper explosion limit / Upper

flammability limit

26.2 %(V)

Lower explosion limit / Lower

flammability limit

0.6 %(V)

Vapour pressure : 4,600 hPa (20 °C)

Relative vapour density : No data available

Relative density : 0.818 (20 °C)

Reference substance: Water The value is calculated

Density : 0.82 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 : $< 20.5 \text{ mm2/s} (40 \,^{\circ}\text{C})$

Explosive properties : Not explosive

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



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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 : Remarks: Effects due to ingestion may include:

Symptoms: Central nervous system depression

Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

Acute inhalation toxicity : Symptoms: Inhalation may provoke the following symptoms:,

Respiratory disorder, Dizziness, Drowsiness, Vomiting, Fatigue, Vertigo, Central nervous system depression

Remarks: Respiration of solvent vapour may cause dizziness.

Harmful by inhalation.



according to GB/T 16483 and GB/T 17519



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Acute dermal toxicity : 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

copper:

Acute oral toxicity : LD50 Oral (Rat): > 300 - 2,000 mg/kg

Assessment: The component/mixture is moderately toxic after

single ingestion.

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg

Assessment: The substance or mixture has no acute dermal

toxicity

n-Butyl acetate:

Acute oral toxicity : LD50 (Rat): 10,768 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 21 mg/l

according to GB/T 16483 and GB/T 17519



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Exposure time: 4 h
Test atmosphere: vapour

Method: OECD Test Guideline 403

GLP: yes

Assessment: The substance or mixture has no acute

inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 17,600 mg/kg

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

according to GB/T 16483 and GB/T 17519



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n-Butyl acetate:

Species : Rabbit

Assessment : No skin irritation

Method : OECD Test Guideline 404

Result : Repeated exposure may cause skin dryness or cracking.

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

copper:

Result : Eye irritation

n-Butyl acetate:

Species : Rabbit

Result : No eye irritation Assessment : No eye irritation

Method : OECD Test Guideline 405

GLP : yes

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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

n-Butyl 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.

n-hexane:

Species : Mouse

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



according to GB/T 16483 and GB/T 17519



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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

n-Butyl acetate:

Genotoxicity in vitro : Test Type: Ames test

Test system: Salmonella typhimurium Method: OECD Test Guideline 471

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster cells Method: OECD Test Guideline 473

Result: negative

Genotoxicity in vivo : Species: Mouse

Application Route: Oral

Method: OECD Test Guideline 474

Result: negative

Germ cell mutagenicity -

Assessment

: Tests on bacterial or mammalian cell cultures did not show

mutagenic effects., Animal testing did not show any mutagenic

effects.

according to GB/T 16483 and GB/T 17519



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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

n-Butyl acetate:

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 -

: - Fertility -

Assessment

Animal testing did not show any effects on fertility.

n-Butyl acetate:

Effects on fertility : Test Type: Two-generation study

Species: Rat

Application Route: inhalation (vapour)
General Toxicity - Parent: NOAEC: 750 mg/l
General Toxicity F1: NOAEC: 750 mg/l
General Toxicity F2: NOAEC: 750 mg/l
Method: OECD Test Guideline 416

Result: Embryotoxic effects and adverse effects on the

offspring were detected.

according to GB/T 16483 and GB/T 17519



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Reproductive toxicity -

Assessment

: - Fertility -

No evidence of adverse effects on sexual function and fertility,

or on development, based on animal experiments.

- Teratogenicity -

No toxicity to reproduction

n-hexane:

Reproductive toxicity -

- Fertility -

Assessment

Suspected human reproductive toxicant

STOT - single exposure

Product:

Remarks : No data available

Components:

Naphtha (petroleum), hydrotreated light:

Exposure routes : Inhalation

Target Organs : Central nervous system

Assessment : May cause drowsiness or dizziness.

n-Butyl acetate:

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.

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.

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STOT - repeated exposure

Product:

Remarks : No data available

Components:

n-Butyl acetate:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, repeated exposure.

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.

Components:

n-Butyl acetate:

Species : Rat

NOAEL : 125 mg/kg Application Route : Oral

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



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Naphtha (petroleum), hydrotreated light:

May be fatal if swallowed and enters airways.

n-Butyl acetate:

No aspiration toxicity classification

n-hexane:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks : Risks of irreversible effects after a single exposure.

Ingestion causes irritation of upper respiratory system and

gastrointestinal disturbance.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish

Remarks: 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

according to GB/T 16483 and GB/T 17519



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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.

copper:

M-Factor (Acute aquatic

toxicity)

: 10



according to GB/T 16483 and GB/T 17519



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M-Factor (Chronic aquatic

toxicity)

10

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

n-Butyl acetate:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 18 mg/l

Exposure time: 96 h

Test Type: flow-through test

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia (water flea)): 44 mg/l

Exposure time: 48 h Test Type: static test

Toxicity to algae/aquatic

plants

EC50 (Desmodesmus subspicatus (green algae)): 397 mg/l

Exposure time: 72 h Test Type: static test

Toxicity to daphnia and other :

aquatic invertebrates (Chronic toxicity)

NOEC (Daphnia magna (Water flea)): 23 mg/l

Exposure time: 21 d

Test Type: Reproduction Test

GLP: yes

Toxicity to microorganisms : EC50 (Tetrahymena pyriformis): 356 mg/l

Exposure time: 40 h

Test Type: Growth inhibition

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 : ErC50 (Pseudokirchneriella subcapitata (green algae)): 9.285

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plants 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

copper:

Biodegradability : Result: Not rapidly biodegradable

n-Butyl acetate:

Biodegradability : Primary biodegradation

Result: rapidly biodegradable

Biodegradation: 83 % Exposure time: 28 d

Method: OECD Test Guideline 301D

n-hexane:

Biodegradability : aerobic

according to GB/T 16483 and GB/T 17519



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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

n-Butyl acetate:

Partition coefficient: n-

log Pow: 2.3 (25 °C) pH: 7

octanol/water

Method: OECD Test Guideline 117

GLP: yes

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 : Remarks: No data available

according to GB/T 16483 and GB/T 17519



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environmental compartments

Other adverse effects

Product:

Additional ecological

information

Very toxic to aquatic organisms, may cause long-term adverse

effects in the aquatic environment.

Components:

Dimethyl ether:

Results of PBT and vPvB

assessment

Non-classified vPvB substance Non-classified PBT substance

n-Butyl acetate:

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



according to GB/T 16483 and GB/T 17519



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Proper shipping name : Aerosols, flammable

Class : 2.1

Packing group : Not assigned by regulation

Labels : Flammable Gas

Packing instruction (cargo : 203

aircraft)

Packing instruction : 203

(passenger aircraft)

IMDG-Code

UN number : UN 1950
Proper shipping name : AEROSOLS

(naphtha (petroleum), hydrotreated light, copper)

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

Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals : Not applicable

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

No. / Code Chemical name / Category Threshold quantity

W3 Aerosols 150 t



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Hazardous Chemicals for Priority Management under : Not applicable

SAWS

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 : Not applicable

and Export

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

16. OTHER INFORMATION

Date format : yyyy/mm/dd

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

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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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