

# SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758 - GB



## OKS 241

Version 2.3	Revision Date: 14.12.2022	Date of last issue: 20.09.2022 Date of first issue: 30.03.2013	Print Date: 14.12.2022
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Product name : OKS 241

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

Use of the Substance/Mixture : Lubricant spray

Recommended restrictions on use : Restricted to professional users.

### 1.3 Details of the supplier of the safety data sheet

Company : OKS Spezialschmierstoffe GmbH  
Ganghoferstr. 47  
D-82216 Maisach-Gernlinden  
Tel.: +49 8142 3051 500  
Fax.: +49 8142 3051 599  
info@oks-germany.com

E-mail address of person responsible for the SDS : mcm@oks-germany.com  
Material Compliance Management

National contact :

### 1.4 Emergency telephone number

Emergency telephone number : +49 8142 3051 517 (24/7 service)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)**

Aerosols, Category 1	H222: Extremely flammable aerosol. H229: Pressurised container: May burst if heated.
Skin irritation, Category 2	H315: Causes skin irritation.
Specific target organ toxicity - single exposure, Category 3, Central nervous system	H336: May cause drowsiness or dizziness.
Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters

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airways.

Short-term (acute) aquatic hazard,  
Category 1

H400: Very toxic to aquatic life.

Long-term (chronic) aquatic hazard,  
Category 2

H411: Toxic to aquatic life with long lasting effects.

## 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

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, hot surfaces, sparks,  
open flames and other ignition sources. No  
smoking.  
P211 Do not spray on an open flame or other  
ignition source.  
P251 Do not pierce or burn, even after use.  
P273 Avoid release to the environment.  
**Response:**  
P301 + P310 IF SWALLOWED: Immediately call a  
POISON CENTER/ doctor.  
P331 Do NOT induce vomiting.  
**Storage:**  
P410 + P412 Protect from sunlight. Do not expose to  
temperatures exceeding 50 °C/ 122 °F.

### Hazardous components which must be listed on the label:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

n-butyl acetate

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### Additional Labelling

#### 2.3 Other hazards

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

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Active substance with propellant  
Solvent mixture

#### Components

Chemical name	CAS-No. EC-No.  Index-No. Registration number	Classification	specific concentration limit M-Factor Notes Acute toxicity estimate	Concentration (% w/w)
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	921-024-6	Flam. Liq.2; H225 Skin Irrit.2; H315 STOT SE3; H336 Asp. Tox.1; H304 Aquatic Chronic2; H411		>= 25 - < 30
copper	7440-50-8 231-159-6  029-019-01-X	Acute Tox.4; H302 Eye Irrit.2; H319 Aquatic Acute1; H400 Aquatic Chronic1; H410	M-Factor: 10/1	>= 2.5 - < 10
n-butyl acetate	123-86-4 204-658-1  607-025-00-1	Flam. Liq.3; H226 STOT SE3; H336; EUH066		>= 1 - < 10
Substances with a workplace exposure limit :				
dimethyl ether	115-10-6 204-065-8  603-019-00-8	Flam. Gas1A; H220 Press. GasLiquefied gas; H280		>= 30 - < 50
tin	7440-31-5	Not classified		>= 1 - < 10

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	231-141-8			
molybdenum disulphide	1317-33-5 215-263-9	Not classified		$\geq 1 - < 10$

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- If inhaled : Take victim immediately to hospital.  
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.  
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.

### 4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Inhalation may provoke the following symptoms:  
Unconsciousness  
Dizziness

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Drowsiness  
Headache  
Nausea  
Tiredness  
Skin contact may provoke the following symptoms:  
Erythema  
Allergic appearance

Aspiration may cause pulmonary oedema and pneumonitis.

Risks : Central nervous system depression  
Risk of product entering the lungs on vomiting after ingestion.  
Health injuries may be delayed.  
Causes skin irritation.  
May cause an allergic skin reaction.

### 4.3 Indication of any immediate medical attention and special treatment needed

Treatment : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.  
Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : ABC powder  
Unsuitable extinguishing media : High volume water jet

### 5.2 Special hazards arising from the substance or mixture

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 products : Carbon oxides  
Nitrogen oxides (NOx)  
Sulphur oxides  
Oxides of phosphorus  
Metal oxides

### 5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment. Exposure to decomposition products may be a hazard to health.

Further information : Standard procedure for chemical fires.

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Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Cool containers/tanks with water spray.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : 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.  
Only qualified personnel equipped with suitable protective equipment may intervene.

### 6.2 Environmental precautions

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.

### 6.3 Methods and material for containment and cleaning up

Methods for 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.

### 6.4 Reference to other sections

For personal protection see section 8.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling : 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 exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Keep away from fire, sparks and heated surfaces.  
Persons with a history of skin sensitisation problems or

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asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Smoking, eating and drinking should be prohibited in the application area.

Wash hands and face before breaks and immediately after handling the product.

Do not get in eyes or mouth or on skin.

Do not get on skin or clothing.

Do not ingest.

Do not 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.

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

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : 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.

### 7.3 Specific end use(s)

Specific use(s) : Specific instructions for handling, not required.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
dimethyl ether	115-10-6	TWA	400 ppm 766 mg/m <sup>3</sup>	GB EH40GB EH40 (2005-04-06)
		STEL	500 ppm 958 mg/m <sup>3</sup>	GB EH40GB EH40 (2005-04-06)
		TWA	1,000 ppm 1,920 mg/m <sup>3</sup>	2000/39/EC2 000/39/EC (2000-06-16)
Further information: Indicative				

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copper	7440-50-8	TWA (Fumes)	0.2 mg/m <sup>3</sup> (Copper)	GB EH40GB EH40 (2020-01-01)
		TWA (Dusts and mists)	1 mg/m <sup>3</sup> (Copper)	GB EH40GB EH40 (2020-01-01)
		STEL (Dusts and mists)	2 mg/m <sup>3</sup> (Copper)	GB EH40GB EH40 (2020-01-01)
n-butyl acetate	123-86-4	TWA	150 ppm 724 mg/m <sup>3</sup>	GB EH40GB EH40 (2005-04-06)
		STEL	200 ppm 966 mg/m <sup>3</sup>	GB EH40GB EH40 (2005-04-06)
		STEL	150 ppm 723 mg/m <sup>3</sup>	2019/1831/E U2019/1831/ EU (2019-10-31)
Further information: Indicative				
		TWA	50 ppm 241 mg/m <sup>3</sup>	2019/1831/E U2019/1831/ EU (2019-10-31)
Further information: Indicative				
tin	7440-31-5	TWA	2 mg/m <sup>3</sup> (Tin)	GB EH40GB EH40 (2005-04-06)
		STEL	4 mg/m <sup>3</sup> (Tin)	GB EH40GB EH40 (2005-04-06)
		TWA	2 mg/m <sup>3</sup> (Tin)	91/322/EEC9 1/322/EEC (1991-07-05)
Further information: Indicative				
molybdenum disulphide	1317-33-5	TWA	10 mg/m <sup>3</sup> (Molybdenum)	GB EH40GB EH40 (2005-04-06)
		STEL	20 mg/m <sup>3</sup> (Molybdenum)	GB EH40GB EH40 (2005-04-06)

### Derived No Effect Level (DNEL):

Substance name	End Use	Exposure routes	Potential health effects	Value
dimethyl ether	Workers	Inhalation	Long-term exposure	1894 mg/m <sup>3</sup>
Hydrocarbons, C6- C7, n-alkanes,	Workers	Skin contact	Long-term systemic effects	773 mg/kg bw/day

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isoalkanes, cyclics, <5% n-hexane				
	Workers	Inhalation	Long-term systemic effects	2035 mg/m <sup>3</sup>
Benzene, mono-C10-13-alkyl derivs., distn. residues	Workers	Inhalation	Long-term systemic effects	2.2 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	3.15 mg/kg bw/day
n-butyl acetate	Workers	Inhalation	Long-term systemic effects	300 mg/m <sup>3</sup>
	Workers	Inhalation	Acute systemic effects	600 mg/m <sup>3</sup>
	Workers	Dermal	Long-term local effects	11 mg/cm <sup>2</sup>

### Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
dimethyl ether	Fresh water	0.155 mg/l
	Marine water	0.016 mg/l
	Sewage treatment plant	160 mg/l
	Fresh water sediment	0.681 mg/kg
	Marine sediment	0.069 mg/kg
	Soil	0.045 mg/kg
	Benzene, mono-C10-13-alkyl derivs., distn. residues	Fresh water
Intermittent use/release		0.001 mg/l
Marine water		0 mg/l
Microbiological Activity in Sewage Treatment Systems		2 mg/l
Fresh water sediment		16.5 mg/kg
Marine sediment		1.65 mg/kg
Soil		3.7 mg/kg
n-butyl acetate	Fresh water	0.18 mg/l
	Marine water	0.018 mg/l
	Microbiological Activity in Sewage Treatment Systems	35.6 mg/l
	Fresh water sediment	0.981 mg/kg
	Marine sediment	0.0981 mg/kg
	Soil	0.09 mg/kg

## 8.2 Exposure controls

### 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

Eye protection : Safety glasses with side-shields

Hand protection  
Material : butyl-rubber

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- 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.
- 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.
- Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Short term only
- Filter type : Filter type A-P
- Protective measures : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic 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
- Boiling point/boiling range : < -20 °C (1,013 hPa)
- Flash point : -20 °C  
Method: Abel-Pensky
- Evaporation rate : No data available

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Flammability (solid, gas) : Extremely flammable aerosol.

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/cm<sup>3</sup>  
(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<sup>2</sup>/s (40 °C)

Explosive properties : Not explosive

Oxidizing properties : No data available

### 9.2 Other information

Sublimation point : No data available

Metal corrosion rate : Not corrosive to metals

Self-ignition : No data available

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### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

No hazards to be specially mentioned.

#### 10.2 Chemical stability

Stable under normal conditions.

#### 10.3 Possibility of hazardous reactions

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

#### 10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.  
Strong sunlight for prolonged periods.  
Risk of receptacle bursting.

#### 10.5 Incompatible materials

Materials to avoid : Oxidizing agents

#### 10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Acute toxicity

##### Product:

Acute oral toxicity : Acute toxicity estimate: > 2,000 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.  
Harmful by inhalation.  
Toxic by inhalation.

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

Acute dermal toxicity : Symptoms: Redness, Local irritation

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### Components:

#### **Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:**

- Acute oral toxicity : LD50 (Rat): > 5,840 mg/kg  
Assessment: The substance or mixture has no acute oral toxicity
- 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 (Rat): > 2.8 g/kg  
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  
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

#### **dimethyl ether:**

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

#### **tin:**

- Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 423  
GLP: yes  
Assessment: The substance or mixture has no acute oral

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toxicity

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
GLP: yes  
Assessment: The substance or mixture has no acute inhalation toxicity

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

### **molybdenum disulphide:**

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

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

### **Skin corrosion/irritation**

#### **Product:**

Remarks : Irritating to skin.

#### **Components:**

##### **Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:**

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

##### **n-butyl acetate:**

Species : Rabbit  
Assessment : No skin irritation  
Method : OECD Test Guideline 404  
Result : Repeated exposure may cause skin dryness or cracking.

##### **dimethyl ether:**

Assessment : No skin irritation  
Result : No skin irritation

##### **tin:**

Assessment : No skin irritation  
Result : No skin irritation

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### **molybdenum disulphide:**

Assessment : No skin irritation  
Result : No skin irritation

### **Serious eye damage/eye irritation**

#### **Product:**

Remarks : Irritating to eyes.

#### **Components:**

##### **Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:**

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

##### **copper:**

Result : Eye irritation

##### **n-butyl acetate:**

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

##### **dimethyl ether:**

Assessment : No eye irritation  
Result : No eye irritation

##### **tin:**

Assessment : No eye irritation  
Result : No eye irritation

##### **molybdenum disulphide:**

Assessment : No eye irritation  
Result : No eye irritation

### **Respiratory or skin sensitisation**

#### **Product:**

Remarks : This information is not available.

#### **Components:**

##### **Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:**

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

### **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.

### **dimethyl ether:**

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

### **molybdenum disulphide:**

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:**

#### **Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:**

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
Test system: Rodent cell line  
Method: OECD Test Guideline 473  
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

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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.

### 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

### molybdenum disulphide:

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

### Carcinogenicity

#### Product:

Remarks : No data available

#### Components:

##### n-butyl acetate:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

##### dimethyl ether:

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

##### molybdenum disulphide:

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

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### Reproductive toxicity

#### Product:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

#### Components:

##### **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.

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

##### **dimethyl ether:**

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

### STOT - single exposure

#### Components:

##### **Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:**

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.

##### **molybdenum disulphide:**

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

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### STOT - repeated exposure

#### Components:

##### **Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:**

Exposure routes : inhalation (vapour)  
Assessment : No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or less.

##### **n-butyl acetate:**

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

##### **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.

#### 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:

##### **Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:**

May be fatal if swallowed and enters airways.

##### **n-butyl acetate:**

No aspiration toxicity classification

##### **dimethyl ether:**

No aspiration toxicity classification

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### Further information

#### Product:

Remarks : Risks of irreversible effects after a single exposure.  
Ingestion causes irritation of upper respiratory system and  
gastrointestinal disturbance.  
Possible risk of irreversible effects.

#### Components:

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

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product:

Toxicity to fish : Remarks: Very toxic to aquatic organisms.

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

### 12.2 Persistence and degradability

#### Product:

Biodegradability : Remarks: No data available

Physico-chemical removability : Remarks: No data available

### 12.3 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).

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### 12.4 Mobility in soil

**Product:**

Mobility : Remarks: No data available

Distribution among environmental compartments : Remarks: No data available

### 12.5 Results of PBT and vPvB assessment

**Product:**

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

### 12.6 Other adverse effects

**Product:**

Endocrine disrupting potential : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Additional ecological information : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Do not dispose of with domestic refuse.  
Dispose of as hazardous waste in compliance with local and national regulations.

Waste codes should be assigned by the user based on the application for which the product was used.

Contaminated packaging : Packaging that is not properly emptied must be disposed of as the unused product.  
Offer empty spray cans to an established disposal company.  
Pressurized container: Do not pierce or burn, even after use.

The following Waste Codes are only suggestions:

Waste Code : unused product, packagings not completely emptied  
16 05 04\*, gases in pressure containers (including halons)  
containing hazardous substances

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### SECTION 14: Transport information

#### 14.1 UN number or ID number

**ADR** : UN 1950  
**RID** : UN 1950  
**IMDG** : UN 1950  
**IATA** : UN 1950

#### 14.2 UN proper shipping name

**ADR** : AEROSOLS  
**RID** : AEROSOLS  
**IMDG** : AEROSOLS  
(naphtha (petroleum), hydrotreated light, copper)  
**IATA** : Aerosols, flammable

#### 14.3 Transport hazard class(es)

**ADR** : 2  
**RID** : 2  
**IMDG** : 2.1  
**IATA** : 2.1

#### 14.4 Packing group

**ADR**  
Packing group : Not assigned by regulation  
Classification Code : 5F  
Labels : 2.1  
Tunnel restriction code : (D)

**RID**  
Packing group : Not assigned by regulation  
Classification Code : 5F  
Hazard Identification Number : 23  
Labels : 2.1

**IMDG**  
Packing group : Not assigned by regulation  
Labels : 2.1  
EmS Code : F-D, S-U

**IATA (Cargo)**  
Packing instruction (cargo aircraft) : 203  
Packing instruction (LQ) : Y203  
Packing group : Not assigned by regulation

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Labels : Flammable Gas

**IATA (Passenger)**

Packing instruction : 203  
(passenger aircraft)

Packing instruction (LQ) : Y203

Packing group : Not assigned by regulation

Labels : Flammable Gas

### 14.5 Environmental hazards

**ADR**

Environmentally hazardous : yes

**RID**

Environmentally hazardous : yes

**IMDG**

Marine pollutant : yes

### 14.6 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.

### 14.7 Maritime transport in bulk according to IMO instruments

Remarks : Not applicable for product as supplied.

## SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). (EU SVHC) : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

REACH - List of substances subject to authorisation (Annex XIV) (EU. REACH-Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer (EC 1005/2009) : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) (EU POP) : Not applicable

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Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals (EU PIC) : Not applicable

UK REACH List of substances subject to authorisation (Annex XIV) (UK. REACH Annex XIV) : Not applicable

GB Export and import of hazardous chemicals - Prior Informed Consent (PIC) Regulation (GB PIC) : Not applicable

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors : Not applicable

### 15.2 Chemical safety assessment

This information is not available.

## SECTION 16: Other information

### Full text of R-Phrases

Note U (table 3.1) : When put on the market gases have to be classified as "Gases under pressure", in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned: Press. Gas (Comp.) Press. Gas (Liq.) Press. Gas (Ref. Liq.) Press. Gas (Diss.) Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).

### Full text of H-Statements

EUH066 : Repeated exposure may cause skin dryness or cracking.  
H220 : Extremely flammable gas.  
H225 : Highly flammable liquid and vapour.  
H226 : Flammable liquid and vapour.  
H280 : Contains gas under pressure; may explode if heated.  
H302 : Harmful if swallowed.  
H304 : May be fatal if swallowed and enters airways.  
H315 : Causes skin irritation.  
H319 : Causes serious eye irritation.  
H336 : May cause drowsiness or dizziness.  
H400 : Very toxic to aquatic life.  
H410 : Very toxic to aquatic life with long lasting effects.  
H411 : Toxic to aquatic life with long lasting effects.

### Full text of other abbreviations

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- Note U (table 3.1) : When put on the market gases have to be classified as “Gases under pressure”, in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned: Press. Gas (Comp.) Press. Gas (Liq.) Press. Gas (Ref. Liq.) Press. Gas (Diss.) Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).
- 2000/39/EC : Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
- 2019/1831/EU : Europe. Commission Directive 2019/1831/EU establishing a fifth list of indicative occupational exposure limit values
- 91/322/EEC : Europe. Commission Directive 91/322/EEC on establishing indicative limit values
- GB EH40 : UK. EH40 WEL - Workplace Exposure Limits
- 2000/39/EC / TWA : Limit Value - eight hours
- 2019/1831/EU / TWA : Limit Value - eight hours
- 2019/1831/EU / STEL : Short term exposure limit
- 91/322/EEC / TWA : Limit Value - eight hours
- GB EH40 / TWA : Long-term exposure limit (8-hour TWA reference period)
- GB EH40 / STEL : Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship;

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REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; 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

### Classification of the mixture:

Aerosol 1	H222, H229
Skin Irrit. 2	H315
STOT SE 3	H336
Asp. Tox. 1	H304
Aquatic Acute 1	H400
Aquatic Chronic 2	H411

### Classification procedure:

Based on product data or assessment
Calculation method
Calculation method
Based on product data or assessment
Calculation method
Calculation method

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