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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : OKS 2511

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

Use of the Sub-

stance/Mixture

: Anticorrosion additive

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

mcm@oks-germany.com

responsible for the SDS

Material Compliance Management

National contact :

1.4 Emergency telephone number

Emergency telephone num-

: +49 8142 3051 517

ber

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Aerosols, Category 1 H222: Extremely flammable aerosol.

H229: Pressurised container: May burst if heated.

Skin irritation, Category 2 H315: Causes skin irritation.

Eye irritation, Category 2 H319: Causes serious eye irritation.

Specific target organ toxicity - repeated H373: May cause damage to organs through pro-

exposure, Category 2, Auditory system longed or repeated exposure if inhaled.

Short-term (acute) aquatic hazard, Cate- H400: Very toxic to aquatic life.

a brand of
FREUDENBERG

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gory 1

Long-term (chronic) aquatic hazard, Cat-

egory 1

H410: Very toxic to aquatic life with long lasting

effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms







Signal word : Danger

Hazard statements : H222 Extremely flammable aerosol.

H229 Pressurised container: May burst if heated.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H373 May cause damage to organs (Auditory

system) through prolonged or repeated ex-

posure if inhaled.

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.

P260 Do not breathe mist.

P273 Avoid release to the environment.

Response:

P391 Collect spillage.

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: reaction mass of ethylbenzene and xylene

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.



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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Active agent with propellant and solvent.

Metal powder

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration limits M-Factor Notes	Concentration (% w/w)
zinc powder — zinc dust (stabilised)	7440-66-6 231-175-3 030-001-01-9 01-2119467174-37- XXXX	Aquatic Acute1; H400 Aquatic Chronic1; H410	M-Factor: 1/1	>= 25 - < 30
reaction mass of ethylbenzene and xylene	905-588-0 01-2119488216-32- XXXX	Flam. Liq.3; H226 Acute Tox.4; H332 Acute Tox.4; H312 Skin Irrit.2; H315 Eye Irrit.2; H319 STOT SE3; H335 STOT RE2; H373 Asp. Tox.1; H304	Note C	>= 10 - < 20
2-methoxy-1- methylethyl acetate	108-65-6 203-603-9 607-195-00-7 01-2119475791-29- XXXX	Flam. Liq.3; H226 STOT SE3; H336		>= 1 - < 10
Hydrocarbons, C11- C12, isoalkanes, < 2% aromatics	918-167-1 01-2119472146-39- XXXX	Flam. Liq.3; H226 Asp. Tox.1; H304	Note P	>= 1 - < 10
n-butyl acetate	123-86-4 204-658-1 607-025-00-1 01-2119485493-29- XXXX	Flam. Liq.3; H226 STOT SE3; H336		>= 1 - < 10
acetone	67-64-1 200-662-2	Flam. Liq.2; H225 Eye Irrit.2; H319		>= 1 - < 10



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	606-001-00-8 01-2119471330-49- XXXX	STOT SE3; H336		
Substances with a work	place exposure limit:			
butane	106-97-8 203-448-7 601-004-00-0 01-2119474691-32- XXXX	Flam. Gas1A; H220 Press. GasCompr. Gas; H280	Note U (table 3.1), Note C	>= 30 - < 50
propane	74-98-6 200-827-9 601-003-00-5 01-2119486944-21- XXXX	Flam. Gas1A; H220 Press. GasCompr. Gas; H280	Note U (table 3.1)	>= 10 - < 20
isobutane	75-28-5 200-857-2 601-004-00-0 01-2119485395-27- XXXX	Flam. Gas1A; H220 Press. GasCompr. Gas; H280	Note U (table 3.1), Note C	>= 1 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

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

medical attention.

Keep patient warm and at rest.

If unconscious, place in recovery position and seek medical

advice.

Keep respiratory tract clear.

If breathing is irregular or stopped, administer artificial respira-

tion.

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

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

persists.

Wash clothing before reuse.

Thoroughly clean shoes before reuse.

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

for at least 10 minutes.



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Seek medical advice.

If swallowed : Move the victim to fresh air.

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

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Inhalation may provoke the following symptoms:

Unconsciousness

Dizziness Drowsiness Headache Nausea Tiredness

Skin contact may provoke the following symptoms:

Erythema

Risks : Causes skin irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : 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 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 concentra-

tions. Vapours can accumulate in low areas.

Hazardous combustion prod: :

ucts

Carbon oxides

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 decomposi-

tion 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.

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 ab-

sorbent 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 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 ap-

plication area.

Wash hands and face before breaks and immediately after

handling the product.



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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 results in a substitute of the second state.

tional regulations.

Storage class (TRGS 510) : 2B, Aerosol cans and lighters

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
butane	106-97-8	AGW	1.000 ppm	DE TRGS
			2.400 mg/m3	900
				(2006-01-01)
Peak-limit: excursion factor (category)	4;(II)			
reaction mass of	Not As-	TWA	50 ppm	2000/39/EC
ethylbenzene and	signed		221 mg/m3	(2000-06-16)
xylene				
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		STEL	100 ppm	2000/39/EC
			442 mg/m3	(2000-06-16)
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		AGW	100 ppm	DE TRGS
			440 mg/m3	900
				(2010-08-04)



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Peak-limit: excursion factor (category)	2;(II)			
Further information	Skin absorption	on		
propane	74-98-6	AGW	1.000 ppm 1.800 mg/m3	DE TRGS 900 (2006-01-01)
Peak-limit: excursion factor (category)	4;(II)			
2-methoxy-1- methylethyl ace- tate	108-65-6	TWA	50 ppm 275 mg/m3	2000/39/EC (2000-06-16)
Further information	Identifies the	possibility of signific	ant uptake through the skin,	Indicative
		STEL	100 ppm 550 mg/m3	2000/39/EC (2000-06-16)
Further information	Identifies the	possibility of signific	ant uptake through the skin,	Indicative
		AGW	50 ppm 270 mg/m3	DE TRGS 900 (2006-01-01)
Peak-limit: excursion factor (category)	1;(I)			
Further information		s compliance with th arming the unborn o	e OEL and biological toleran child	ce values, there
isobutane	75-28-5	AGW	1.000 ppm 2.400 mg/m3	DE TRGS 900 (2006-01-01)
Peak-limit: excursion factor (category)	4;(II)		•	
Hydrocarbons, C11-C12, isoal- kanes, < 2% aro- matics	Not As- signed	AGW	1.500 mg/m3	DE TRGS 900 (2009-02-16)
Peak-limit: excursion factor (category)	2;(II)			
Further information	Group exposu	ure limit for hydroca	rbon solvent mixtures	
n-butyl acetate	123-86-4	AGW	62 ppm 300 mg/m3	DE TRGS 900 (2012-09-13)
Peak-limit: excursion factor (category)	2;(I)			
Further information		s compliance with th arming the unborn o	e OEL and biological toleran child	ce values, there
acetone	67-64-1	TWA	500 ppm 1.210 mg/m3	2000/39/EC (2000-06-16)
Further information	Indicative			
		AGW	500 ppm	DE TRGS

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		1.200 mg/m3	900 (2015-03-02)
Peak-limit: excur-	2;(I)		
sion factor (catego-			
ry)			
Further information	When there is compliance with the	OEL and biological tolerand	e values, there
	is no risk of harming the unborn ch	nild	

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
reaction mass of ethylbenzene and xylene	Not As- signed	xylene: 1,5 mg/l (Blood)	Immediately after exposure or after working hours	TRGS 903 (2013-09- 19)
		methylhippuric acid (all isomers): 2 g/l (Urine)	Immediately after exposure or after working hours	TRGS 903 (2013-09- 19)
acetone	67-64-1	Acetone: 80 mg/l (Urine)	Immediately after exposure or after working hours	TRGS 903 (2004-08- 01)

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
zinc powder — zinc dust (stabilised)	Workers	Inhalation	Long-term systemic effects	5 mg/m3
	Workers	Skin contact	Long-term systemic effects	83 mg/kg
reaction mass of ethylbenzene and xylene	Workers	Inhalation	Long-term systemic effects	221 mg/m3
	Workers	Inhalation	Acute systemic effects	442 mg/m3
	Workers	Inhalation	Long-term local ef- fects	221 mg/m3
	Workers	Inhalation	Acute local effects	442 mg/m3
	Workers	Skin contact	Long-term systemic effects	212 mg/m3
2-methoxy-1- methylethyl acetate	Workers	Inhalation	Long-term systemic effects	275 mg/m3
	Workers	Inhalation	Long-term local ef- fects	550 mg/m3
	Workers	Skin contact	Long-term systemic effects	796 mg/kg bw/day
n-butyl acetate	Workers	Inhalation	Long-term systemic effects	300 mg/m3
	Workers	Inhalation	Acute systemic ef- fects	600 mg/m3
	Workers	Dermal	Long-term local ef- fects	11 mg/cm2

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value	
----------------	---------------------------	-------	--

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zinc powder — zinc dust (stabilised)	Fresh water	0,0206 mg/l
	Fresh water sediment	235,6 mg/kg
	Marine water	0,0061 mg/l
	Marine sediment	121 mg/kg
	Microbiological Activity in Sewage Treatment Systems	0,052 mg/l
	Soil	106,8 mg/kg
reaction mass of ethylbenzene and xylene	Fresh water	0,327 mg/l
	Marine water	0,327 mg/l
	Sewage treatment plant	6,58 mg/l
	Fresh water sediment	12,46 mg/kg
	Marine sediment	12,46 mg/kg
	Soil	2,31 mg/kg
2-methoxy-1-methylethyl acetate	Fresh water	0,635 mg/l
	Marine water	0,0635 mg/l
	Intermittent use/release	6,35 mg/l
	Microbiological Activity in Sewage Treatment Systems	100 mg/l
	Fresh water sediment	3,29 mg/kg
	Marine sediment	0,329 mg/kg
	Soil	0,29 mg/kg
n-butyl acetate	Fresh water	0,18 mg/l
	Marine water	0,018 mg/l
	Microbiological Activity in Sewage Treat-	35,6 mg/l
	ment Systems	
	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 : Nitrile rubber
Break through time : > 10 min
Protective index : Class 1

Remarks : Wear protective gloves. The break through time depends

amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each

case.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374



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derived from it.

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 (AX)

The type of protective equipment must be selected according Protective measures

to the concentration and amount of the dangerous substance

at the specific workplace.

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the spe-

cific work-place.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance aerosol

Colour grey

Odour characteristic

Odour Threshold No data available

рΗ substance/mixture is non-soluble (in water)

Melting point/range No data available

: -41 °C Boiling point/boiling range

(1.013 hPa)

Flash point -60.00 °C

Method: Abel-Pensky, closed cup

Evaporation rate No data available

Flammability (solid, gas) Extremely flammable aerosol.

Upper explosion limit / Upper

flammability limit

10,9 %(V)

Lower explosion limit / Lower : 1,1 %(V)

flammability limit



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Vapour pressure : 4.000 hPa (20 °C)

Relative vapour density : No data available

Relative density : 0,8 (20 °C)

Reference substance: Water The value is calculated

Density : 0,80 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 : not determined

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 : not auto-flammable

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

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

10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

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

Respiratory disorder

Acute toxicity estimate: > 5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

Acute dermal toxicity : Symptoms: Redness, Local irritation

Acute toxicity estimate: > 2.000 mg/kg

Method: Calculation method

Components:

zinc powder — zinc dust (stabilised):

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg

Method: OECD Test Guideline 401

GLP: yes

Assessment: The substance or mixture has no acute oral tox-

icity

Acute inhalation toxicity : LC50 (Rat): > 5,41 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

GLP: ves

Assessment: The substance or mixture has no acute inhala-

tion toxicity



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reaction mass of ethylbenzene and xylene:

Acute oral toxicity : LD50 (Rat): 3.523 - 4.000 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.

2-methoxy-1-methylethyl acetate:

Acute oral toxicity : LD50 (Rat): 6.190 mg/kg

Method: OECD Test Guideline 401

GLP: yes

Acute inhalation toxicity : LC50 (Rat): 35,7 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

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

Method: OECD Test Guideline 402

Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics:

Acute oral toxicity : LD50 Oral (Rat): > 5.000 mg/kg

Method: OECD Test Guideline 401

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

Method: OECD Test Guideline 402

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 inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rabbit): > 17.600 mg/kg

acetone:

Acute oral toxicity : LD50 Oral (Rat): 5.800 mg/kg

butane:

Acute inhalation toxicity : LC50 (Rat): 658 mg/l

Exposure time: 4 h
Test atmosphere: gas



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isobutane:

Acute inhalation toxicity : LC50 (Rat): 658 mg/l

Exposure time: 4 h Test atmosphere: gas

Skin corrosion/irritation

Product:

Remarks : Irritating to skin.

Components:

zinc powder - zinc dust (stabilised):

Species : Rabbit

Assessment : No skin irritation Result : No skin irritation

reaction mass of ethylbenzene and xylene:

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

2-methoxy-1-methylethyl acetate:

Species : Rabbit

Assessment : No skin irritation

Method : OECD Test Guideline 404

Result : No skin irritation

GLP : yes

Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics:

Result : Repeated exposure may cause skin dryness or cracking.

n-butyl acetate:

Species : Rabbit

Assessment : No skin irritation

Method : OECD Test Guideline 404

Result : Repeated exposure may cause skin dryness or cracking.

acetone:

Result : Repeated exposure may cause skin dryness or cracking.

Serious eye damage/eye irritation

Product:

Remarks : Irritating to eyes.



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Components:

zinc powder — zinc dust (stabilised):

Species : Rabbit Exposure time : 24 h

Assessment : No eye irritation

Method : OECD Test Guideline 405

Result : No eye irritation

GLP : yes

reaction mass of ethylbenzene and xylene:

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

2-methoxy-1-methylethyl acetate:

Species : Rabbit

Assessment : No eye irritation

Method : OECD Test Guideline 405

Result : No eye irritation

GLP : yes

n-butyl acetate:

Species : Rabbit

Assessment : No eye irritation

Method : OECD Test Guideline 405

Result : No eye irritation

GLP : yes

acetone:

Species : Rabbit
Result : Eye irritation

Respiratory or skin sensitisation

Product:

Remarks : This information is not available.

Components:

zinc powder — zinc dust (stabilised):

Species : Guinea pig

Assessment : Did not cause sensitisation on laboratory animals.

Method : OECD Test Guideline 406

Result : Did not cause sensitisation on laboratory animals.

GLP : yes

reaction mass of ethylbenzene and xylene:



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Assessment : Did not cause sensitisation on laboratory animals. Result : Did not cause sensitisation on laboratory animals.

2-methoxy-1-methylethyl acetate:

Test Type : Maximisation 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.

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Components:

zinc powder - zinc dust (stabilised):

Germ cell mutagenicity- As-

: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

sessment

2-methoxy-1-methylethyl acetate:

Germ cell mutagenicity- As-

sessment

Tests on bacterial or mammalian cell cultures did not show mutagenic effects., Animal testing did not show any mutagenic

effects.

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- As-

sessment

Tests on bacterial or mammalian cell cultures did not show

mutagenic effects., Animal testing did not show any mutagenic

effects.

Carcinogenicity

Product:

Remarks No data available

Components:

zinc powder — zinc dust (stabilised):

Carcinogenicity - Assess-

ment

: No evidence of carcinogenicity in animal studies.

2-methoxy-1-methylethyl acetate:

ment

Carcinogenicity - Assess- : Not classifiable as a human carcinogen.

n-butyl acetate:

Carcinogenicity - Assess-

ment

: Not classifiable as a human carcinogen.

Reproductive toxicity

Product:

Effects on fertility Remarks: No data available

Effects on foetal develop-

ment

Remarks: No data available

Components:

zinc powder — zinc dust (stabilised):

Reproductive toxicity - As-No toxicity to reproduction sessment No effects on or via lactation

reaction mass of ethylbenzene and xylene:

Reproductive toxicity - As-

: Animal testing did not show any effects on fertility.

sessment

2-methoxy-1-methylethyl acetate:

a brand of **TREUDENBERG**

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Reproductive toxicity - As-

sessment

No toxicity to reproduction No toxicity to reproduction

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 off-

spring were detected.

Reproductive toxicity - As-

sessment

No evidence of adverse effects on sexual function and fertility,

or on development, based on animal experiments.

No toxicity to reproduction

STOT - single exposure

Components:

reaction mass of ethylbenzene and 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.

2-methoxy-1-methylethyl acetate:

Exposure routes : Ingestion

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-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.

acetone:

Exposure routes : Inhalation

Assessment : May cause drowsiness or dizziness.



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STOT - repeated exposure

Components:

reaction mass of ethylbenzene and xylene:

Exposure routes : Inhalation
Target Organs : Auditory system

Assessment : The substance or mixture is classified as specific target organ

toxicant, repeated exposure, category 2.

2-methoxy-1-methylethyl acetate:

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

organ toxicant, repeated exposure.

n-butyl acetate:

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:

This information is not available.

Components:

zinc powder — zinc dust (stabilised):

No aspiration toxicity classification

reaction mass of ethylbenzene and xylene:

May be fatal if swallowed and enters airways.

2-methoxy-1-methylethyl acetate:

No aspiration toxicity classification



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Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics:

May be fatal if swallowed and enters airways.

n-butyl acetate:

No aspiration toxicity classification

Further information

Product:

Remarks Ingestion causes irritation of upper respiratory system and

gastrointestinal disturbance.

SECTION 12: Ecological information

12.1 Toxicity

Product:

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

environment.

Toxicity to daphnia and other : Remarks: No data available

aquatic invertebrates

Toxicity to algae/aquatic

plants

Remarks: No data available

Toxicity to microorganisms

Remarks: No data available

Components:

zinc powder — zinc dust (stabilised):

Toxicity to fish LC50 (Oncorhynchus kisutch (coho salmon)): 0,727 mg/l

> Exposure time: 96 h Test Type: static test

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0,937 mg/l

Exposure time: 48 h Test Type: static test

Method: OECD Test Guideline 202

M-Factor (Acute aquatic tox- :

icity)

1

M-Factor (Chronic aquatic

toxicity)



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Ecotoxicology Assessment

Acute aquatic toxicity Very toxic to aquatic life.

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

reaction mass of ethylbenzene and xylene:

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)): 2,6 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

2-methoxy-1-methylethyl acetate:

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 - 180

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)): 373 mg/l

Exposure time: 48 h Test Type: static test

Method: OECD Test Guideline 202

GLP: yes

Toxicity to algae/aquatic

plants

NOEC (Pseudokirchneriella subcapitata (green algae)): >=

1.000 mg/l

Exposure time: 72 h Test Type: static test

Method: OECD Test Guideline 201

GLP: yes

EC10 (activated sludge): > 1.000 mg/l Toxicity to microorganisms

> Exposure time: 0,5 h Test Type: static test

Method: OECD Test Guideline 209

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

EC50: > 100 mg/lExposure time: 21 d

ic toxicity)

Species: Daphnia magna (Water flea)

Test Type: Reproduction Test Method: OECD Test Guideline 211

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

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Toxicity to algae/aquatic

plants

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

Exposure time: 72 h Test Type: static test

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

Exposure time: 40 h

Test Type: Growth inhibition

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC: 23 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea)

Test Type: Reproduction Test

GLP: yes

12.2 Persistence and degradability

Product:

Remarks: No data available Biodegradability

Physico-chemical removabil- : Remarks: No data available

Components:

reaction mass of ethylbenzene and xylene:

Biodegradability Result: rapidly biodegradable

Biodegradation: 90 % Exposure time: 28 d

2-methoxy-1-methylethyl acetate:

Biodegradability Test Type: aerobic

Inoculum: activated sludge Result: rapidly biodegradable Biodegradation: 83 %

Exposure time: 28 d

Method: OECD Test Guideline 301F

GLP: yes

Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics:

Biodegradability : Result: Not readily biodegradable.

n-butyl acetate:

Biodegradability Test Type: Primary biodegradation

Result: rapidly biodegradable

Biodegradation: 83 % Exposure time: 28 d

Method: OECD Test Guideline 301D

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acetone:

Biodegradability : Result: rapidly biodegradable

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).

Components:

reaction mass of ethylbenzene and xylene:

Partition coefficient: n-

octanol/water

: log Pow: 3,12 - 3,2

2-methoxy-1-methylethyl acetate:

Bioaccumulation : Bioconcentration factor (BCF): 3,16

Partition coefficient: n-

octanol/water

log Pow: 0,36 (25 °C)

Method: OECD Test Guideline 107

GLP: yes

Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics:

Bioaccumulation : Remarks: No data available

Partition coefficient: n-

octanol/water

: Remarks: No data available

n-butyl acetate:

Partition coefficient: n-

log Pow: 2,3 (25 °C)

octanol/water

pH: 7

Method: OECD Test Guideline 117

GLP: yes

acetone:

Bioaccumulation : Remarks: Does not bioaccumulate.

Partition coefficient: n-

octanol/water

log Pow: 0,2

butane:

Partition coefficient: n- : log Pow: 2,89

octanol/water Method: OECD Test Guideline 107

propane:

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Partition coefficient: n-

octanol/water

log Pow: 2,36

isobutane:

Partition coefficient: n-

log Pow: 2,88 octanol/water

Method: OECD Test Guideline 107

12.4 Mobility in soil

Product:

Mobility Remarks: No data available

Distribution among environ-

mental 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...

Components:

2-methoxy-1-methylethyl acetate:

Non-classified PBT substance. Non-classified vPvB sub-Assessment

stance.

n-butyl acetate:

Assessment Non-classified PBT substance. Non-classified vPvB sub-

stance.

12.6 Other adverse effects

Product:

Endocrine disrupting poten-

tial

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 infor-

mation

: No information on ecology is available.



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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

SECTION 14: Transport information

14.1 UN number

ADN : UN 1950
ADR : UN 1950
RID : UN 1950
IMDG : UN 1950
IATA : UN 1950

14.2 UN proper shipping name

ADN : AEROSOLS
ADR : AEROSOLS
RID : AEROSOLS
IMDG : AEROSOLS

(zinc powder - zinc dust (stabilized))

IATA : Aerosols, flammable

14.3 Transport hazard class(es)

 ADN
 : 2

 ADR
 : 2

 RID
 : 2



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IMDG : 2.1 IATA : 2.1

14.4 Packing group

ADN

Packing group : Not assigned by regulation

Classification Code : 5F Labels : 2.1

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 : 203

aircraft)

Packing instruction (LQ) : Y203

Packing group : Not assigned by regulation

Labels : Flammable Gas

IATA (Passenger)

Packing instruction (passen- : 203

ger aircraft)

Packing instruction (LQ) : Y203

Packing group : Not assigned by regulation

Labels : Flammable Gas

14.5 Environmental hazards

ADN

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

rid

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

IATA (Passenger)

Environmentally hazardous : no

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IATA (Cargo)

Environmentally hazardous no

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 Transport in bulk according to Annex II of Marpol and the IBC Code

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 - Candidate List of Substances of Very High

Concern for Authorisation (Article 59).

This product does not contain substances of very high concern (Regu-

lation (EC) No 1907/2006 (REACH),

Article 57). REACH - List of substances subject to authorisation

(Annex XIV)

Not applicable

Regulation (EC) No 1005/2009 on substances that de-

plete the ozone layer

Not applicable

Regulation (EU) 2019/1021 on persistent organic pollu-

tants (recast)

Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import

of dangerous chemicals

Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances.

preparations and articles (Annex XVII)

: Not applicable

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors

Acquisition, introduction, possession or use of the explosive precursor by the general public is subject to report-

ing obligations.

acetone (ANNEX II)

P2

P₅c



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Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of

major-accident hazards involving dangerous substances.

P3a FLAMMABLE AEROSOLS

E1 ENVIRONMENTAL

HAZARDS

18 Liquefied extremely flam-

mable gases (including LPG) and natural gas

Water contaminating class

(Germany)

WGK 2 obviously hazardous to water

Classification according to AwSV, Annex 1 (5.2)

TA Luft List (Germany) : Total dust:

Not applicable

Inorganic substances in powdered form:

portion Class 3: 26,62 %

Inorganic substances in vapour or gaseous form:

Not applicable Organic Substances: others: 71,1 %

Carcinogenic substances:

Not applicable Mutagenic: Not applicable Toxic to reproduction: Not applicable

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial

emissions (integrated pollution prevention and control) Volatile organic compounds (VOC) content: 73,38 %

Other regulations:

Take note of Law on the protection of mothers at work, in education and in studies (Maternity Protection Act - MuSchG).

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

15.2 Chemical safety assessment

This information is not available.

SECTION 16: Other information

Full text of H-Statements

H220 : Extremely flammable gas.

H225 : Highly flammable liquid and vapour.

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1.1000			Element II Post I and a second	
H226		:	Flammable liquid and vapour.	
H280		:	Contains gas under pressure; may	explode if heated.
H304		:	May be fatal if swallowed and enter	ers airways.
H312		:	Harmful in contact with skin.	
H315		:	Causes skin irritation.	
H319		:	Causes serious eye irritation.	
H332		:	Harmful if inhaled.	
H335		:	May cause respiratory irritation.	
H336		:	May cause drowsiness or dizzines	ss.
H373		:	May cause damage to organs throexposure if inhaled.	ough prolonged or repeated
H400		:	Very toxic to aquatic life.	

Full text of other abbreviations

H410

Note C	:	Some organic substances may be marketed either in a specif-
		ic isomeric form or as a mixture of several isomers. In this
		case the supplier must state on the label whether the sub-

stance is a specific isomer or a mixture of isomers.

Very toxic to aquatic life with long lasting effects.

Note P : The classification as a carcinogen or mutagen need not apply

if it can be shown that the substance contains less than 0,1 % w/w benzene (Einecs No 200-753-7). When the substance is not classified as a carcinogen at least the precautionary statements (P102-)P260- P262-P301 + P310-P331 shall apply. This note applies only to certain complex oil-derived sub-

stances in Part 3.

Note U (table 3.1) : When put on the market gases have to be classified as "Gas-

es 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

DE TRGS 900 : Germany. TRGS 900 - Occupational exposure limit values.

TRGS 903 : TRGS 903 - Biological limit values

2000/39/EC / TWA : Limit Value - eight hours 2000/39/EC / STEL : Short term exposure limit DE TRGS 900 / AGW : Time Weighted Average



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ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European 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; 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; TRGS -Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture: Classification procedure:

Aerosol 1	H222, H229	Based on product data or assessment
Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
STOT RE 2	H373	Calculation method
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 1	H410	Calculation method

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from third parties are up-to-date. All information and instructions in this safety data sheet have been compiled to the best of our knowledge and are based on the information available to us on the day of publication. The information provided is intended to describe the product in relation to the required safety measures; it is neither an assurance of characteristics nor a guarantee of the product's suitability for particular applications and does not justify any contractual legal relationship. The existence of a safety data sheet for a particular jurisdiction does not necessarily mean that import or use within that jurisdiction is legally permitted. If you have any questions, please contact your responsible sales contact or authorized trading partner.