according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

VersionRevision Date:Date of last issue: 07.03.2024Print Date:2.730.01.2025Date of first issue: 22.06.201630.01.2025

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

1.1 Product identifier

Product name : OKS 2101

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

Use of the : Anticorrosion additive

Substance/Mixture

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

82216 Maisach-Gernlinden

Deutschland

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

National contact

1.4 Emergency telephone number

Emergency telephone

number

: +33 1 45 42 59 59 ORFILA

+33 1 72 11 00 03 NCEC

+49 8142 3051 517

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.

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

Version Revision Date: Date of last issue: 07.03.2024 Print Date: 2.7 30.01.2025 Date of first issue: 22.06.2016 30.01.2025

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

airways.

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)

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.

H411 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:

pentane



according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

VersionRevision Date:Date of last issue: 07.03.2024Print Date:2.730.01.2025Date of first issue: 22.06.201630.01.2025

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

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

Hydrocarbons, C6, isoalkanes, <5% n-hexane

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.

Ecological information: 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.

Toxicological information: 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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Active substance with propellant

Solvent

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	specific concentration limit M-Factor Notes Acute toxicity estimate	Concentration (% w/w)
pentane	109-66-0 203-692-4 601-006-00-1 01-2119459286-30- XXXX	Flam. Liq.2; H225 STOT SE3; H336 Asp. Tox.1; H304 Aquatic Chronic2; H411		>= 10 - < 20
propane	74-98-6 200-827-9 601-003-00-5	Flam. Gas1A; H220 Press. GasCompr. Gas; H280	Note U (table 3.1)	>= 10 - < 20



according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

VersionRevision Date:Date of last issue: 07.03.2024Print Date:2.730.01.2025Date of first issue: 22.06.201630.01.2025

	01-2119486944-21- XXXX			
Hydrocarbons, C9- C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	265-150-3	Flam. Liq.3; H226 STOT SE3; H336 Asp. Tox.1; H304 Aquatic Chronic2;	Note P	>= 2,5 - < 10
2276 aromatics	01-2119463258-33	H411; EUH066		
Hydrocarbons, C11- C12, isoalkanes, < 2% aromatics	918-167-1	Flam. Liq.3; H226 Asp. Tox.1; H304; EUH066	Note P	>= 1 - < 10
	01-2119472146-39- XXXX			
Hydrocarbons, C6, isoalkanes, <5% n-hexane	931-254-9	Flam. Liq.2; H225 Skin Irrit.2; H315 STOT SE3; H336 Asp. Tox.1; H304	Note P	>= 2,5 - < 10
	01-2119484651-34- XXXX	Aquatic Chronic2; H411		
isobutane	75-28-5 200-857-2	Flam. Gas1A; H220 Press. GasCompr.	Note U (table	>= 1 - < 10
	601-004-00-0 01-2119485395-27- XXXX	Gas; H280	3.1), Note C	
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane	926-605-8	Flam. Liq.2; H225 Skin Irrit.2; H315 STOT SE3; H336 Asp. Tox.1; H304	Note P	>= 2,5 - < 10
	01-2119486291-36- XXXX	Aquatic Chronic2; H411		
2-butoxyethanol	111-76-2 203-905-0	Acute Tox.4; H302 Acute Tox.3; H331 Skin Irrit.2; H315		>= 1 - < 10
	603-014-00-0 01-2119475108-36- XXXX	Eye Irrit.2; H319		
			ATE (Oral): 1.200 mg/kg; ATE (Inhalation): 3 mg/l;	
Substances with a work				
butane	106-97-8	Flam. Gas1; H220		>= 30 - < 50

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

Version Date of last issue: 07.03.2024 Print Date: Revision Date: 30.01.2025 Date of first issue: 22.06.2016 30.01.2025 2.7

	203-448-7 601-004-00-0 01-2119474691-32- XXXX	Press. GasCompr. Gas; H280	Note U (table 3.1), Note C	
Paraffin waxes and Hydrocarbon waxes	8002-74-2 232-315-6	Not classified		>= 1 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of 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.

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.

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

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 : Aspiration may cause pulmonary oedema and pneumonitis.

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

Version Revision Date: Date of last issue: 07.03.2024 Print Date: 2.7 30.01.2025 Date of first issue: 22.06.2016 30.01.2025

Inhalation may provoke the following symptoms:

Unconsciousness

Dizziness Drowsiness Headache Nausea Tiredness

Skin contact may provoke the following symptoms:

Erythema

Risks : Central nervous system depression

Risk of product entering the lungs on vomiting after ingestion.

Health injuries may be delayed.

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

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

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.

Collect contaminated fire extinguishing water separately. This

must not be discharged into drains. Cool containers/tanks with water spray.

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

VersionRevision Date:Date of last issue: 07.03.2024Print Date:2.730.01.2025Date of first issue: 22.06.201630.01.2025

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 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.



according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

Version Revision Date: Date of last issue: 07.03.2024 Print Date: 2.7 30.01.2025 Date of first issue: 22.06.2016 30.01.2025

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
butane	106-97-8	VME	800 ppm	FR VLE
			1.900 mg/m3	(2005-02-01)
	Further inform	nation: Indicative exp	osure limits	
pentane	109-66-0	TWA	1.000 ppm	2006/15/EC
			3.000 mg/m3	(2006-02-09)
	Further information: Indicative			
		VME	1.000 ppm	FR VLE
			3.000 mg/m3	(2012-07-01)
	Further information: Regulatory binding exposure limits			
Hydrocarbons, C9-	Not	VME (Vapour)	1.000 mg/m3	FR VLE
C11, n-alkanes,	Assigned			(2016-10-01)
isoalkanes, cyclics,				
<2% aromatics				
	Further information: Indicative exposure limits			
		VLCT (VLE)	1.500 mg/m3	FR VLE
		(Vapour)		(2016-10-01)



according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

VersionRevision Date:Date of last issue: 07.03.2024Print Date:2.730.01.2025Date of first issue: 22.06.201630.01.2025

	Further information: Indicative exposure limits			
Paraffin waxes and	8002-74-2	VME (Fumes)	2 mg/m3	FR VLE
Hydrocarbon				(2012-05-10)
waxes				
	Further inform	nation: Indicative exp	osure limits	
2-butoxyethanol	111-76-2	TWA	20 ppm	2000/39/EC
			98 mg/m3	(2000-06-16)
	Further information: Identifies the possibility of significant uptake through the			
	skin, Indicative			
		STEL	50 ppm	2000/39/EC
			246 mg/m3	(2000-06-16)
	Further information: Identifies the possibility of significant uptake through the			
	skin, Indicative			
		VLCT (VLE)	50 ppm	FR VLE
			246 mg/m3	(2012-07-01)
	Further information: Risk of penetration through skin, Regulatory binding			
	exposure limits			
		VME	10 ppm	FR VLE
			49 mg/m3	(2012-07-01)
	Further information: Risk of penetration through skin, Regulatory binding exposure limits			

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

Substance name	End Use	Exposure routes	Potential health effects	Value
pentane	Workers	Inhalation	Long-term systemic effects	3000 mg/m3
	Workers	Skin contact	Long-term systemic effects	432 mg/kg
Hydrocarbons, C11- C12, isoalkanes, < 2% aromatics	Workers	Inhalation	Acute systemic effects	1286,4 mg/m3
	Workers	Inhalation	Long-term local effects	837,5 mg/m3
Hydrocarbons, C6, isoalkanes, <5% n-hexane	Workers	Inhalation	Acute systemic effects	1286,4 mg/m3
	Workers	Inhalation	Long-term local effects	837,5 mg/m3
Hydrocarbons, C6- C7, isoalkanes, cyclics, <5% n- hexane	Workers	Inhalation	Acute systemic effects	1286,4 mg/m3
	Workers	Inhalation	Long-term local effects	837,5 mg/m3
2-butoxyethanol	Workers	Inhalation	Long-term systemic effects	98 mg/m3
	Workers	Inhalation	Acute systemic effects	1091 mg/m3
	Workers	Skin contact	Long-term systemic	125 mg/kg



according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

VersionRevision Date:Date of last issue: 07.03.2024Print Date:2.730.01.2025Date of first issue: 22.06.201630.01.2025

		effects	bw/day
Workers	Skin contact	Acute systemic effects	89 mg/kg bw/day
Workers	Inhalation	Acute local effects	246 mg/m3

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

Substance name	Environmental Compartment	Value
2-butoxyethanol	Fresh water	8,8 mg/l
	Marine water	0,88 mg/l
	Sewage treatment plant	463 mg/l
	Fresh water sediment	34,6 mg/kg
	Marine sediment	
	Soil	2,33 mg/kg
	Intermittent use/release	26,4 mg/l

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/face 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 derived from it.

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

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

VersionRevision Date:Date of last issue: 07.03.2024Print Date:2.730.01.2025Date of first issue: 22.06.201630.01.2025

at the specific workplace.

Environmental exposure controls

Air :

Should not be released into the environment.

Soil

Do not allow contact with soil, surface or ground water. The product should not be allowed to enter drains, water

courses or the soil.

Water

Do not allow contact with soil, surface or ground water. The product should not be allowed to enter drains, water

courses or the soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : aerosol

Colour : yellow

Odour : characteristic

Odour Threshold : No data available

Melting point/range : No data available

Boiling point/boiling range : -161 °C (1.013 hPa)

Flammability (solid, gas) : Extremely flammable aerosol.

Upper explosion limit / Upper

flammability limit

9,4 %(V)

Lower explosion limit / Lower :

flammability limit

0,6 %(V)

Flash point : 0 °C

Method: Abel-Pensky

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

Version Revision Date: Date of last issue: 07.03.2024 Print Date: 2.7 30.01.2025 Date of first issue: 22.06.2016 30.01.2025

Auto-ignition temperature : No data available

Decomposition temperature : No data available

pH : Not applicable

substance/mixture is non-soluble (in water)

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : < 20,5 mm2/s (40 °C)

Solubility(ies)

Water solubility : insoluble

Solubility in other solvents : No data available

Partition coefficient: n-

octanol/water

No data available

Vapour pressure : 8.327 hPa (20 °C)

Relative density : 0,638 (20 °C)

Reference substance: Water The value is calculated

Density : 0,64 g/cm3

(20 °C)

Bulk density : No data available

Relative vapour density : No data available

Particle characteristics

Particle size : No data available

9.2 Other information

Explosives : Not explosive

Oxidizing properties : No data available

Self-ignition : No data available

Metal corrosion rate : Not corrosive to metals

Evaporation rate : No data available

Sublimation point : No data available

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

Version Revision Date: Date of last issue: 07.03.2024 Print Date: 2.7 30.01.2025 Date of first issue: 22.06.2016 30.01.2025

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 hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product:

Acute oral toxicity : Remarks: Effects due to ingestion may include:

Symptoms: Central nervous system depression

Acute toxicity estimate: > 2.000 mg/kg

Method: Calculation method

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

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

Acute toxicity estimate: > 20 mg/l

Exposure time: 4 h



according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

Version Revision Date: Date of last issue: 07.03.2024 Print Date: 2.7 30.01.2025 Date of first issue: 22.06.2016 30.01.2025

Test atmosphere: vapour Method: Calculation method

Acute dermal toxicity : Symptoms: Redness, Local irritation

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Acute inhalation toxicity : Assessment: The substance or mixture is classified as specific

target organ toxicant, single exposure, category 3 with

narcotic effects.

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

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

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

isobutane:

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

Exposure time: 4 h Test atmosphere: gas

2-butoxyethanol:

Acute oral toxicity : Acute toxicity estimate: 1.200 mg/kg

Method: Acute toxicity estimate according to Regulation (EC)

No. 1272/2008

LD50 (Guinea pig): 1.414 mg/kg Method: OECD Test Guideline 401

Acute inhalation toxicity : Acute toxicity estimate: 3 mg/l

Test atmosphere: vapour

Method: Acute toxicity estimate according to Regulation (EC)

No. 1272/2008

LC50: 3 mg/l Exposure time: 4 h Test atmosphere: vapour

Assessment: The component/mixture is toxic after short term

inhalation.

Acute dermal toxicity : LD50 (Guinea pig): > 2.000 mg/kg

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

VersionRevision Date:Date of last issue: 07.03.2024Print Date:2.730.01.2025Date of first issue: 22.06.201630.01.2025

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

toxicity

butane:

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

Exposure time: 4 h Test atmosphere: gas

Skin corrosion/irritation

Product:

Remarks : Irritating to skin.

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Result : Repeated exposure may cause skin dryness or cracking.

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

Result : Repeated exposure may cause skin dryness or cracking.

Hydrocarbons, C6, isoalkanes, <5% n-hexane:
Result : Skin irritation

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

Species : Rabbit Result : Skin irritation

2-butoxyethanol:

Species : Rabbit

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

Serious eye damage/eye irritation

Product:

Remarks : Irritating to eyes.

Components:

2-butoxyethanol:

Species : Rabbit

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



15 / 29

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

VersionRevision Date:Date of last issue: 07.03.2024Print Date:2.730.01.2025Date of first issue: 22.06.201630.01.2025

Respiratory or skin sensitisation

Product:

Remarks : This information is not available.

Components:

2-butoxyethanol:

Test Type : Maximisation Test

Species : Guinea pig

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

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Components:

2-butoxyethanol:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Remarks: In vitro tests did not show mutagenic effects

Genotoxicity in vivo : Test Type: In vivo micronucleus test

Species: Rat

Method: OECD Test Guideline 474

Result: negative

Germ cell mutagenicity-

Assessment

In vitro tests did not show mutagenic effects

Carcinogenicity

Product:

Remarks : No data available

Components:

2-butoxyethanol:

Carcinogenicity - : Animal testing did not show any carcinogenic effects.

Assessment

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

Version Revision Date: Date of last issue: 07.03.2024 Print Date: 2.7 30.01.2025 Date of first issue: 22.06.2016 30.01.2025

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Effects on foetal development

: Remarks: No data available

Components:

2-butoxyethanol:

Reproductive toxicity - : - Fertility -

Assessment No toxicity to reproduction

- Teratogenicity -

Animal testing did not show any effects on foetal

development.

STOT - single exposure

Product:

Remarks : No data available

Components:

pentane:

Assessment : May cause drowsiness or dizziness.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Exposure routes : Inhalation

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

toxicant, single exposure, category 3 with narcotic effects.

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Assessment : May cause drowsiness or dizziness.

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

Assessment : May cause drowsiness or dizziness.

2-butoxyethanol:

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

organ toxicant, single exposure.

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

VersionRevision Date:Date of last issue: 07.03.2024Print Date:2.730.01.2025Date of first issue: 22.06.201630.01.2025

STOT - repeated exposure

Product:

Remarks : No data available

Components:

2-butoxyethanol:

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.

Aspiration toxicity

Product:

May be fatal if swallowed and enters airways.

May be fatal if swallowed and enters airways.

Components:

pentane:

May be fatal if swallowed and enters airways.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics:

May be fatal if swallowed and enters airways.

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

May be fatal if swallowed and enters airways.

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

May be fatal if swallowed and enters airways.

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

May be fatal if swallowed and enters airways.

2-butoxyethanol:

No aspiration toxicity classification



according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

VersionRevision Date:Date of last issue: 07.03.2024Print Date:2.730.01.2025Date of first issue: 22.06.201630.01.2025

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : 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.

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: Toxic to aquatic organisms, may cause long-term

adverse effects in the aquatic environment.

Toxicity to daphnia and other :

aquatic invertebrates

Remarks: No data available

Toxicity to algae/aquatic

plants

Remarks: No data available

Toxicity to microorganisms

Remarks: No data available

Components:

pentane:

Ecotoxicology Assessment

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

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

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

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

Version Revision Date: Date of last issue: 07.03.2024 Print Date: 2.7 30.01.2025 Date of first issue: 22.06.2016 30.01.2025

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l

aquatic invertebrates Exposure time: 48 h

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

Ecotoxicology Assessment

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

2-butoxyethanol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1.474 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)): 1.550 mg/l

Exposure time: 48 h
Test Type: Immobilization

Method: OECD Test Guideline 202

Toxicity to algae/aquatic

plants

EC50 (Pseudokirchneriella subcapitata (green algae)): 1.840

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 286

ma/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to fish (Chronic

toxicity)

NOEC: > 100 mg/l

Exposure time: 21 d

Species: Danio rerio (zebra fish)

Toxicity to daphnia and other :

aquatic invertebrates (Chronic toxicity)

NOEC: 100 mg/l

Exposure time: 21 d

Species: Daphnia magna (Water flea) Test Type: Reproduction Test Method: OECD Test Guideline 211

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Physico-chemical

removability

Remarks: No data available



according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

VersionRevision Date:Date of last issue: 07.03.2024Print Date:2.730.01.2025Date of first issue: 22.06.201630.01.2025

Components:

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

Biodegradability : Result: Not readily biodegradable.

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Biodegradability : Result: Not rapidly biodegradable

2-butoxyethanol:

Biodegradability : Test Type: aerobic

Result: rapidly biodegradable Biodegradation: 90 % Exposure time: 28 d

Method: OECD Test Guideline 301B

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

propane:

Partition coefficient: n-

octanol/water

log Pow: 2,36

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

Bioaccumulation : Remarks: No data available

Partition coefficient: n-

octanol/water

Remarks: No data available

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Bioaccumulation : Remarks: No data available

Partition coefficient: n-

octanol/water

log Pow: 4

isobutane:

Partition coefficient: n- : log Pow: 2,88

octanol/water Method: OECD Test Guideline 107

2-butoxyethanol:

Bioaccumulation : Bioconcentration factor (BCF): 3,16

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OKS 2101

VersionRevision Date:Date of last issue: 07.03.2024Print Date:2.730.01.2025Date of first issue: 22.06.201630.01.2025

Partition coefficient: n- : log Pow: 0,81 (25 °C)

octanol/water Method: OECD Test Guideline 107

butane:

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

octanol/water Method: OECD Test Guideline 107

12.4 Mobility in soil

Product:

Mobility : Remarks: No data available

Distribution among : Remarks: No data available

environmental compartments

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 Endocrine disrupting properties

Product:

Assessment : 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.

12.7 Other adverse effects

Product:

Additional ecological

information

: Toxic to aquatic life with long lasting effects.

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.

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

Version Revision Date: Date of last issue: 07.03.2024 Print Date: 2.7 30.01.2025 Date of first issue: 22.06.2016 30.01.2025

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 or ID 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

(naphtha (petroleum), hydrotreated light, cyclohexane)

IATA : Aerosols, flammable

(naphtha (petroleum), hydrotreated light)

14.3 Transport hazard class(es)

 ADN
 : 2

 ADR
 : 2

 RID
 : 2

 IMDG
 : 2.1

 IATA
 : 2.1



according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

Version Date of last issue: 07.03.2024 **Revision Date:** Print Date: 30.01.2025 Date of first issue: 22.06.2016 30.01.2025 2.7

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 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

Flammable Gas Labels

IATA (Passenger)

Packing instruction 203

(passenger aircraft)

Packing instruction (LQ)

Not assigned by regulation Packing group

Flammable Gas Labels

14.5 Environmental hazards

ADN

Environmentally hazardous ves

Environmentally hazardous yes

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



according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

Version Date of last issue: 07.03.2024 **Revision Date:** Print Date: 30.01.2025 30.01.2025 2.7 Date of first issue: 22.06.2016

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)

Conditions of restriction for the following entries should be considered:

Number on list 75

If you intend to use this product as tattoo ink, please contact your

vendor.

2-butoxyethanol (Number on list 3)

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).

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

Regulation (EU) No 649/2012 of the European

Parliament and the Council concerning the export and

import of dangerous chemicals

(EU PIC)

Not applicable

REACH - List of substances subject to authorisation

(Annex XIV)

(EU. REACH-Annex XIV)

: Not applicable

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

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

VersionRevision Date:Date of last issue: 07.03.2024Print Date:2.730.01.2025Date of first issue: 22.06.201630.01.2025

explosives precursors

P2

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

E2 ENVIRONMENTAL HAZARDS

Liquefied flammable gases (including LPG) and natural gas

Petroleum products: (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams),(d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to

(d)

Installations classified for the protection of the environment (Environment Code R511-9)

4320, 4511, 4310, 4734, 1436

Occupational Illnesses (R-

461-3, France)

84, 36, 36 bis

Reinforced medical supervision (R4624-23)

The product has no CMR properties category 1, 1A or 1B

Volatile organic compounds

Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) Volatile organic compounds (VOC) content: 93,32 %

Other regulations:



according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

VersionRevision Date:Date of last issue: 07.03.2024Print Date:2.730.01.2025Date of first issue: 22.06.201630.01.2025

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

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. 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.

H331 : Toxic if inhaled.

H336 : May cause drowsiness or dizziness.

H411 : Toxic to aquatic life with long lasting effects.

EUH066 : Repeated exposure may cause skin dryness or cracking.

Full text of other abbreviations

Note C : Some organic substances may be marketed either in a

specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Note P : The harmonised classification as a carcinogen or mutagen

applies unless it can be shown that the substance contains less than 0,1 % w/w benzene (Einecs No 200-753-7), in which

case a classification in accordance with Title II of this Regulation shall be performed also for those hazard classes. Where the substance is not classified as a carcinogen or mutagen, at least the precautionary statements (P102-)P260-

P262-P301 + P310-P331 shall apply.

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OKS 2101

Version Revision Date: Date of last issue: 07.03.2024 Print Date: 2.7 30.01.2025 Date of first issue: 22.06.2016 30.01.2025

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

2006/15/EC : Europe. Indicative occupational exposure limit values

FR VLE : France. Occupational Exposure Limits

2000/39/EC / TWA : Limit Value - eight hours 2000/39/EC / STEL : Short term exposure limit 2006/15/EC / TWA : Limit Value - eight hours FR VLE / VME : Time Weighted Average FR VLE / VLCT (VLE) : Short Term Exposure Limit

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; 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; TECI - Thailand Existing Chemicals

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878 - FR



OKS 2101

VersionRevision Date:Date of last issue: 07.03.2024Print Date:2.730.01.2025Date of first issue: 22.06.201630.01.2025

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 STOT SE 3 H336 Calculation method Asp. Tox. 1 H304 Based on product data or assessment

Aquatic Chronic 2 H411 Calculation method

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