OKS 270

Version	Revision Date:	Date of last issue: 04.11.2022	Print Date:
3.2	19.02.2024	Date of first issue: 24.06.2014	19.02.2024

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : OKS 270

Manufacturer or supplier's details

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

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

Emergency telephone number : +7 495 628 1687
+49 8142 3051 517

Recommended use of the chemical and restrictions on use

Recommended use : Lubricant

Restrictions on use : Restricted to professional users.

2. HAZARDS IDENTIFICATION

GHS Classification (According to GOST 32423, GOST 32424 and GOST 32425)

Skin irritation : Category 3

Reproductive toxicity : Category 2

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 3

GHS-Labelling (According to GOST 31340)

Hazard pictograms :

Signal word : Warning

Hazard statements : H316 Causes mild skin irritation.
H361f Suspected of damaging fertility.
H400 Very toxic to aquatic life.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P201 Obtain special instructions before use.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P391 Collect spillage.

Storage:

P405 Store locked up.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical nature : Mineral oil.
PTFE
solid lubricant
lithium soap

Components

Chemical name	Concentration (% w/w)	Occupational Exposure Limits		CAS-No.	EC-No.
		MAC value mg/m3 / TSEL value	Hazard Class		
Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil — unspecified	>= 30 - < 50	No data available		64742-54-7	265-157-1
Ethylene, tetrafluoro-, polymer	>= 1 - < 10	MPC-TWA: 10 mg/m3 Data Source: RU OEL	f, 4	9002-84-0	618-337-2
Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium	>= 2,5 - < 10	No data available			800-362-7

di[(9Z)-octadec-9-enoate]					
calcium distearate	>= 1 - < 10	MPC-STEL: 10 mg/m3 Data Source: RU OEL	4	1592-23-0	216-472-8
zinc oxide	>= 1 - < 2,5	MPC-TWA: 0,5 mg/m3 Data Source: RU OEL MPC-STEL: 1,5 mg/m3 Data Source: RU OEL	2 2	1314-13-2	215-222-5
zinc carbonate	>= 0,1 - < 0,25	TSEL: 2 mg/m3 Data Source: RU TSEL		3486-35-9	222-477-6
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	>= 0,1 - < 0,25	No data available		68411-46-1	270-128-1
Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts	>= 0,1 - < 1	No data available			939-603-7

4. FIRST AID MEASURES

If inhaled : Obtain medical attention.
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 unconscious, place in recovery position and seek medical advice. Keep respiratory tract clear. Do not induce vomiting without medical advice. Obtain medical attention. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	:	None known. No symptoms known or expected.
Notes to physician	:	Treat symptomatically.

5. FIREFIGHTING MEASURES

Flammable properties

Flash point	:	Not applicable
Ignition temperature	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flammability (solid, gas)	:	Combustible Solids
Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	:	High volume water jet
Hazardous combustion products	:	Carbon oxides Nitrogen oxides (NOx) Oxides of phosphorus Halogenated compounds Metal oxides
Further information	:	Standard procedure for chemical fires. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Special protective equipment	:	In the event of fire, wear self-contained breathing apparatus.

for firefighters	Use personal protective equipment. Exposure to decomposition products may be a hazard to health.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Evacuate personnel to safe areas. Ensure adequate ventilation. Do not breathe vapours, aerosols. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Pick up and transfer to properly labelled containers.

7. HANDLING AND STORAGE

Advice on safe handling	:	Do not use in areas without adequate ventilation. Avoid contact with skin and eyes. For personal protection see section 8. 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 repack. These safety instructions also apply to empty packaging which may still contain product residues. Keep container closed when not in use.
Conditions for safe storage	:	Store in original container. Keep container closed when not in use. Keep in a dry, cool and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in accordance with the particular national regulations. Keep in properly labelled containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

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Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Data Source
Ethylene, tetrafluoro-, polymer	9002-84-0	MPC-TWA (aerosol)	10 mg/m3	RU OEL (2021-02-03)
	Further information: aerosols of predominantly fibrogenic action, Class 4 - Low hazard			
calcium distearate	1592-23-0	MPC-STEL (aerosol)	10 mg/m3	RU OEL (2021-02-03)
	Further information: Class 4 - Low hazard			
zinc oxide	1314-13-2	MPC-TWA (aerosol)	0,5 mg/m3	RU OEL (2021-02-03)
	Further information: Class 2 - Highly dangerous			
		MPC-STEL (aerosol)	1,5 mg/m3	RU OEL (2021-02-03)
	Further information: Class 2 - Highly dangerous			
zinc carbonate	3486-35-9	TSEL (aerosol)	2 mg/m3	RU TSEL (2021-02-03)

Engineering measures : Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Personal protective equipment

Respiratory protection : Not required; except in case of aerosol formation.

Filter type : Filter type A-P

Hand protection
Material : Fluorinated 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.

Eye protection : Safety glasses

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.

Protective measures : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	paste
Colour	:	beige
Odour	:	hydrocarbon-like
Odour Threshold	:	No data available
pH	:	Not applicable substance/mixture is non-soluble (in water)
Drop point	:	> 190 °C (1.013 hPa)
Boiling point/boiling range	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Combustible Solids
Self-ignition	:	not auto-flammable
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	< 0,001 hPa (20 °C)
Relative vapour density	:	No data available
Relative density	:	1,15 (20 °C) Reference substance: Water The value is calculated
Density	:	1,15 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 applicable
Explosive properties	:	Not explosive
Oxidizing properties	:	No data available
Sublimation point	:	No data available
Metal corrosion rate	:	Not corrosive to metals
Particle size	:	Not applicable

10. STABILITY AND REACTIVITY

Reactivity	:	No hazards to be specially mentioned.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	No conditions to be specially mentioned.
Incompatible materials	:	No materials to be especially mentioned.
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : Remarks: This information is not available.

Acute inhalation toxicity : Remarks: This information is not available.

Acute dermal toxicity : Remarks: This information is not available.

Components:

Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil — unspecified:

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

Acute inhalation toxicity : LC50 (Rat): Exposure time: 4 h
Test atmosphere: dust/mist

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

Ethylene, tetrafluoro-, polymer:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 401

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

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

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

calcium distearate:

Acute oral toxicity : LD50 (Rat): 5.000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 200 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

zinc oxide:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 5,7 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
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

zinc carbonate:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 401

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts:

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

Acute inhalation toxicity	:	LC50 (Rat): > 1,9 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Rat): > 2.000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Product:

Remarks	:	This information is not available.

Components:

Ethylene, tetrafluoro-, polymer:

Species	:	Rabbit
Assessment	:	No skin irritation
Result	:	No skin irritation

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

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

calcium distearate:

Species	:	Rabbit
Assessment	:	No skin irritation
Result	:	No skin irritation

zinc oxide:

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

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Species	:	Rabbit
Assessment	:	No skin irritation
Result	:	No skin irritation

Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts:

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

Serious eye damage/eye irritation

Product:

Remarks	:	This information is not available.

Components:

Ethylene, tetrafluoro-, polymer:

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

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

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

calcium distearate:

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

zinc oxide:

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

zinc carbonate:

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

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

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

Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts:

Result	:	No skin irritation
Assessment	:	No eye irritation
Method	:	OECD Test Guideline 405

Respiratory or skin sensitisation

Product:

Remarks	:	This information is not available.

Components:

Ethylene, tetrafluoro-, polymer:

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

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

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

calcium distearate:

Exposure routes	:	Dermal
Species	:	Guinea pig
Assessment	:	Does not cause skin sensitisation.
Result	:	Does not cause skin sensitisation.

zinc oxide:

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

zinc carbonate:

Test Type	:	Maximisation Test
Species	:	Guinea pig
Assessment	:	Does not cause skin sensitisation.
Result	:	Does not cause skin sensitisation.

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

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

Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts:

Assessment	:	Probability or evidence of low to moderate skin sensitisation rate in humans
Result	:	Probability or evidence of low to moderate skin sensitisation rate in humans

Germ cell mutagenicity

Product:

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

Components:

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

Genotoxicity in vitro	:	Test Type: Ames test Result: negative
Germ cell mutagenicity - Assessment	:	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

calcium distearate:

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

zinc oxide:

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

Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts:

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Carcinogenicity

Product:

Remarks : No data available

Components:

Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil — unspecified:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Ethylene, tetrafluoro-, polymer:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

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

calcium distearate:

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

zinc oxide:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

Components:

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

Reproductive toxicity - Assessment : - Fertility -

No toxicity to reproduction
- Teratogenicity -

No toxicity to reproduction

calcium distearate:

Reproductive toxicity - Assessment : - Fertility -

No toxicity to reproduction
- Teratogenicity -

No effects on or via lactation

zinc oxide:

Reproductive toxicity - Assessment : - Fertility -

No toxicity to reproduction
- Teratogenicity -

No toxicity to reproduction

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Reproductive toxicity - Assessment : - Fertility -

Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts:

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

STOT - single exposure

Product:

Remarks	:	No data available

Components:

Ethylene, tetrafluoro-, polymer:

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

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

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

calcium distearate:

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

zinc oxide:

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

STOT - repeated exposure

Product:

Remarks	:	No data available

Components:

Ethylene, tetrafluoro-, polymer:

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

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

Exposure routes	:	Ingestion
Assessment	:	May cause damage to organs through prolonged or repeated exposure.

calcium distearate:

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

zinc oxide:

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:

This information is not available.

Components:

Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil — unspecified:

May be fatal if swallowed and enters airways.

May be harmful if swallowed and enters airways.

Ethylene, tetrafluoro-, polymer:

No aspiration toxicity classification

calcium distearate:

No aspiration toxicity classification

zinc oxide:
No aspiration toxicity classification

Further information

Product:

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

Components:

Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil — unspecified:

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

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Components:

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 0,1 - 1 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 0,1 - 1 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 0,01 - 0,1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	:	10
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EC50 (Daphnia magna (Water flea)): 1,41 mg/l Exposure time: 21 d Test Type: semi-static test Method: OECD Test Guideline 211
M-Factor (Chronic aquatic toxicity)	:	1

Ecotoxicology Assessment

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

calcium distearate:

Toxicity to fish	:	LC50 (Oryzias latipes (Orange-red killifish)): > 100 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)): > 100 mg/l Exposure time: 48 h Test Type: static test
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Test Type: static test

zinc oxide:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): 1,55 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 1 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 0,136 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	(Daphnia magna (Water flea)): 0,04 mg/l Exposure time: 21 d Test Type: semi-static test Method: OECD Test Guideline 211
M-Factor (Chronic aquatic toxicity)	:	1
Toxicity to microorganisms	:	EC50 (activated sludge): > 1.000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 GLP: yes

zinc carbonate:

Toxicity to fish	:	EC50 (Oncorhynchus mykiss (rainbow trout)): 0,169 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Ceriodaphnia dubia (water flea)): 0,147 mg/l Exposure time: 48 h
M-Factor (Acute aquatic toxicity)	:	1
M-Factor (Chronic aquatic toxicity)	:	1

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 51 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EL10 (Daphnia magna (Water flea)): 1,69 mg/l Exposure time: 21 d
Toxicity to microorganisms	:	EC50 (activated sludge): > 100 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209

Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	(Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	NOELR (Desmodesmus subspicatus (green algae)): 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
		EL50 (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 (activated sludge): > 10.000 mg/l

Exposure time: 3 h
Method: OECD Test Guideline 209

Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Physico-chemical removability : Remarks: No data available

Components:

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

Biodegradability : aerobic
Inoculum: activated sludge
Result: rapidly biodegradable
Biodegradation: 65 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
GLP: yes

calcium distearate:

Biodegradability : aerobic
Result: Readily biodegradable.
Biodegradation: 95 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

zinc oxide:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Biodegradability : aerobic
Inoculum: activated sludge
Result: Not rapidly biodegradable
Biodegradation: 1 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
GLP: yes

Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 8 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

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:

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

calcium distearate:

Partition coefficient: n-octanol/water : log Pow: 14,34

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 1.730
Exposure time: 42 d
Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is possible.

Partition coefficient: n-octanol/water : log Pow: > 6

Benzenesulfonic acid, di-C10-14-alkyl derivs., calcium salts:

Bioaccumulation : Bioconcentration factor (BCF): 70,8

Partition coefficient: n-octanol/water : log Pow: 6,91 (20 °C)

Mobility in soil

Product:

Mobility : Remarks: No data available

Distribution among environmental compartments : Remarks: No data available

Other adverse effects

Product:

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

Components:

Ethylene, tetrafluoro-, polymer:

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

calcium distearate:

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

zinc oxide:

Results of PBT and vPvB assessment : Remarks: Not applicable

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

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

Hygienic standards:

(Allowable concentration in air, water, including fishery waters, soil)

Components	Air	Water	Soil	Data Source
calcium distearate	Concentration that provides admissible (acceptable) levels of risk when exposed to at least 24 hours - average daily: 0,15 mg/m3 Limiting health hazard indicator:	TSEL value: 0,25 mg/l Limiting health hazard indicator: organoleptic; increases the turbidity of the water Hazard class: Class 4 - low hazard	No data available	List 1 List 3

	resorptive Hazard class: Class 3 - moderately dangerous Concentration that prevents irritation, reflex reactions, odors when exposed to 20-30 minutes - maximum one-time: 0,5 mg/m3 Limiting health hazard indicator: resorptive Hazard class: Class 3 - moderately dangerous			
zinc oxide	Concentration that provides admissible (acceptable) levels of risk when exposed to at least 24 hours - average daily: 0,05 mg/m3 (Zinc) Limiting health hazard indicator: resorptive Hazard class: Class 3 - moderately dangerous Concentration that provides permissible (acceptable) levels of risk for chronic (at least 1 year) exposure - average annual: 0,035 mg/m3 (Zinc) Limiting health hazard indicator: resorptive Hazard class: Class 3 - moderately dangerous	No data available	No data available	List 1
zinc carbonate	Concentration that provides admissible (acceptable) levels	No data available	No data available	List 1

	of risk when exposed to at least 24 hours - average daily: 0,02 mg/m3 (Zinc) Limiting health hazard indicator: resorptive Hazard class: Class 4 - low hazard			

For explanation of abbreviations see section 16.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not dispose of with domestic refuse.
Dispose of as hazardous waste in compliance with local and national regulations.

Contaminated packaging : Packaging that is not properly emptied must be disposed of as the unused product.
Dispose of waste product or used containers according to local regulations.

The following Waste Codes are only suggestions:

Waste Code : used product, unused product
12 01 12**, spent waxes and fats

uncleaned packagings
15 01 10*, packaging containing residues of or contaminated by hazardous substances

14. TRANSPORT INFORMATION

ADR

UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(fatty amine derivative)
Class : 9
Packing group : III

Labels	:	9
Hazard Identification Number	:	90
Tunnel restriction code	:	(-)
Environmentally hazardous	:	yes

IATA-DGR

UN/ID No.	:	UN 3077
Proper shipping name	:	Environmentally hazardous substance, solid, n.o.s. (fatty amine derivative)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous Dangerous Goods
Packing instruction (cargo aircraft)	:	956
Packing instruction (passenger aircraft)	:	956
Environmentally hazardous	:	yes

IMDG-Code

UN number	:	UN 3077
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (fatty amine derivative)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15. REGULATORY INFORMATION

National regulatory information

Federal Law of 21.07.1997 No. 116-FZ (amended on 11.06.2021) "On industrial safety of hazardous production facilities".
Federal Law of 24.06.1998 No. 89-FZ (amended on 02.07.2021) "On production and consumption waste".
Federal Law of 30.03.1999 No. 52-FZ (amended on 02.07.2021) "On the Sanitary and Epidemiological Well-Being of the Population" (amended and supplemented, entered into force on 31.10.2021).
Federal Law of 04.05.1999 No. 96-FZ "On the protection of atmospheric air" (as amended on December 8, 2020).
Federal Law of 27.12.2002 No. 184-FZ (amended on 02.07.2021) "On Technical Regulation" (amended and supplemented, entered into force on 01.09.2021).

Federal Law of 10.01.2002 No. 7-FZ (amended on 02.07.2021) "On environmental protection".
Federal Law of 22.07.2008 No. 123-FZ "Technical Regulations on Fire Safety Requirements"
TECHNICAL REGULATIONS OF THE CUSTOMS UNION TR CU 030/2012 On requirements for lubricants, oils and special fluids (amended on 03.03.2017).

International Regulations

Montreal Protocol	:	Not applicable
Rotterdam Convention (Prior Informed Consent)	:	Not applicable
Stockholm Convention (Persistent Organic Pollutants)	:	Not applicable

16. OTHER INFORMATION

List of data sources used in the preparation of the Safety Data Sheet

GOST 30333-2007. Interstate standard. Safety data sheet for chemical products. Primary requirements.
GOST 12.1.004-91 System of labor safety standards (SSBT). Fire safety. General requirements.
GOST 12.1.007-76 Occupational safety standards system. Noxious substances. Classification and general safety requirements
GOST 12.1.044-89 SSBT. Fire and explosion hazard of substances and materials. Nomenclature of indicators and methods for their determination.
GOST 12.4.021 System of labor safety standards (SSBT). Ventilation systems. General requirements.
GOST 12.4.137-2001 Special footwear with leather uppers for protection against oil, oil products, acids, alkalis, non-toxic and explosive dust. Technical conditions.
GOST 12.4.252-2013 System of labor safety standards (SSBT). Means of individual protection of hands. Gloves. General technical requirements. Test methods.
GOST 14192-96. Interstate standard. Cargo marking. Minsk, 1998.
GOST 19433-88 Dangerous goods. Classification and labeling.
GOST 31340-2013. Interstate standard. Precautionary labeling of chemical products. General requirements.
GOST 32419-2013 Classification of the hazard of chemical products. General requirements.
GOST 32421-2013 Classification of chemical products, the hazard of which is due to physical and chemical properties. Test methods for explosive chemical products.
GOST 32423-2013 Hazard classification of mixed chemical products by their effects on the body.
GOST 32424-2013 Classification of the hazard of chemical products by their impact on the environment. Basic provisions.
GOST 32425-2013 Hazard classification of mixed chemical products in terms of environmental impact.
GOST R 53264-2019 Fire fighting equipment. Special protective clothing for firefighters. General technical requirements. Test methods.
GOST R 53265-2019 Fire fighting equipment. Personal protective equipment for the feet of the firefighter. General technical requirements. Test methods.
GOST R 53268-2009 Fire fighting equipment. Fire rescue belts. General technical requirements. Test methods.

GOST R 53269-2019 Fire fighting equipment. Firefighters helmets. General technical requirements. Test methods.
SanPiN 1.2.2353-08 "Carcinogenic factors and basic requirements for the prevention of carcinogenic hazard".
SanPiN 1.2.3685-21 "Hygienic standards and requirements for ensuring the safety and (or) harmlessness to humans of environmental factors" dated 28.01.2021.
SanPiN 2.1.3684-21 "Sanitary and epidemiological requirements for the maintenance of the territories of urban and rural settlements, for water bodies, drinking water and drinking water supply, atmospheric air, soils, living quarters, the operation of industrial, public premises, the organization and implementation of sanitary and anti-epidemic (preventive) measures".
SanPiN 2.2.0.555-96. 2.2. Labor hygiene. Hygienic requirements for working conditions for women. Sanitary rules and regulations.
Carriage of dangerous goods, International maritime dangerous goods (IMDG) code.
Water quality standards for fishery water bodies, including standards for maximum permissible concentrations of harmful substances in the waters of fishery water bodies (approved by order of the Ministry of Agriculture of Russia dated December 13, 2016 No. 552).
Regulations for the carriage of dangerous goods (Appendix 1 and 2) to the Agreement on International Goods Transport by Rail (SMGS), 2009.
Agreement on International Goods Transport by Rail (SMGS).
UN Recommendations on the Transport of Dangerous Goods. Typical rules. Twenty-second revised edition. United Nations, New York and Geneva, 2021.
Montreal Protocol (Ozone Depleting Substances)
Stockholm Convention (Persistent Organic Pollutants)

Full text of other abbreviations

Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Asp. Tox.	:	Aspiration hazard
Eye Irrit.	:	Eye irritation
Repr.	:	Reproductive toxicity
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure
RU OEL	:	SanPiN 1.2.3685-21 Table 2.1, Table 2.8, Table 2.16 & Table 2.17 Maximum permissible concentrations (MPC) in the air of the working area
RU TSEL	:	SanPiN 1.2.3685-21 Table 2.2 Tentative Safe Exposure Levels (TSELs) of Pollutants in the Air of the Working Area
RU OEL / MPC-STEL	:	Maximum Permissible Concentration - Short Term Exposure
RU OEL / MPC-TWA	:	Maximum Permissible Concentration - Time Weighted Average
RU TSEL / TSEL	:	TSEL value
List 1	:	SanPiN 1.2.3685-21 Table 1.1, Table 1.10, & Table 1.11 Maximum permissible concentration (MPC) in the air of urban and rural settlements
List 3	:	SanPiN 1.2.3685-21 Table 3.14 & Table 3.18 Indicative permissible levels (TAC) of chemicals in the water of drinking systems of centralized, including hot, and non-centralized water supply, water of ground and surface water bodies of drinking and cultural and domestic water use, water of swimming pools, water parks

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; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; 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; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative