FKL OSR ROT

Version	Revision Date:	SDS Number:	Date of last issue: 14.06.2023
1.1	24.07.2024	50002033	Date of first issue: 14.06.2023

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

1.1 Product identifier

Product name FKL OSR ROT

Other means of identification

Product code 50002033

Unique Formula Identifier (UFI) : DCR0-00EG-6000-0NFN

This substance/ mixture contains nanoforms

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

Use of the Substance/Mixture : Adjuvant for plant protection products

Recommended restrictions on use : Use as recommended by the label.
For professional and industrial use only

1.3 Details of the supplier of the safety data sheet

Supplier Address

Cheminova Deutschland GmbH & Co. KG
Stader Elbstrasse 26
21683 Stade
Germany

Telephone: +49 (0) 4141 9204 0
Telefax: +45 (0) 4141 9204 206
E-mail address: datenblatt@fmc.com, SDS-Info@fmc.com .

1.4 Emergency telephone number

For leak, fire, spill or accident emergencies, call:
Germany: +49-69643508409 (CHEMTREC)
0800-181-7059 (CHEMTREC)

Medical emergency:
Germany: +49 (0) 551 19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Warning

Hazard statements :
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P261 Avoid breathing mist or vapours.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water and soap.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Hazardous components which must be listed on the label:

2-methylisothiazol-3(2H)-one
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Additional Labelling

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

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

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Tristyrylphenol ethoxylates	99734-09-5	Aquatic Chronic 3; H412	>= 2,5 - < 10
Tridecanol, branched, ethoxylated	69011-36-5 500-241-6	Acute Tox. 4; H302 Eye Dam. 1; H318 Aquatic Chronic 2; H411	>= 1 - < 2,5
2-methylisothiazol-3(2H)-one	2682-20-4 220-239-6 613-326-00-9	Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 3; H311 Skin Corr. 1B; H314 Skin Sens. 1A; H317 Eye Dam. 1; H318 Skin Sens. 1A; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH071 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 1 specific concentration limit Skin Sens. 1A; H317	>= 0,25 - < 1

		>= 0,0015 % Acute toxicity estimate Acute oral toxicity: 120 mg/kg Acute inhalation toxicity (dust/mist): 0,11 mg/l Acute dermal toxicity: 242 mg/kg	
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9 613-167-00-5	Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 2; H310 Skin Corr. 1C; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH071 M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100 specific concentration limit Skin Corr. 1C; H314 >= 0,6 % Skin Irrit. 2; H315 0,06 - < 0,6 % Eye Irrit. 2; H319 0,06 - < 0,6 % Skin Sens. 1A; H317 >= 0,0015 % Eye Dam. 1; H318 >= 0,6 % Acute toxicity estimate Acute oral toxicity: 200 mg/kg Acute inhalation toxicity (dust/mist): 0,33	>= 0,0002 - < 0,0015

		mg/l Acute dermal toxicity: 87 mg/kg	

For explanation of abbreviations see section 16.

This substance/ mixture contains nanoforms

Components:

3-hydroxy-N-(o-tolyl)-4-[(2,4,5-trichlorophenyl)azo]naphthalene-2-carboxamide:

Particle characteristics

Particle Size Distribution	:	D10 = 0,04 µm ± 0,02 µm D50 = 0,07 µm ± 0,02 µm D90 = 0,135 µm ± 0,015 µm Measurement technique: TEM
Dustiness	:	Number-Based Dustiness Index: 946.951 1/mg Measurement method: DIN EN 17199-3: Continuous drop method Number-Based Dustiness Index: 2.464 1/mg Measurement method: DIN EN 17199-3: Continuous drop method
Assessment	:	This substance/ mixture contains nanoforms Total Content of Nanomaterials: 80 - 100 %
Shape	:	Shape: cubes Fraction (Weight): 88 % Measurement technique: TEM Shape: spheres Fraction (Weight): 9 % Measurement technique: TEM Shape: rods Fraction (Weight): 3 % Measurement technique: TEM
Crystallinity	:	Crystallinity: crystalline Measurement technique: X-ray Diffraction (XRD)
Surface treatment /Coatings	:	Surface treatment /Coatings: no

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	:	Do not leave the victim unattended.

If inhaled	:	Remove to fresh air. If unconscious, place in recovery position and seek medical advice. If experiencing any discomfort, immediately remove from exposure. Light cases: Keep person under surveillance. Get medical attention immediately if symptoms develop. Serious cases: Get medical attention immediately or call for an ambulance.
In case of skin contact	:	If on clothes, remove clothes. If on skin, rinse well with water. Wash off with soap and plenty of water. Get medical attention immediately if irritation develops and persists.
In case of eye contact	:	Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Keep respiratory tract clear. Do not give milk or alcoholic beverages. Rinse mouth with water. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Risks	:	May cause an allergic skin reaction. Causes serious eye 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	:	Dry chemical, CO2, water spray or regular foam.
Unsuitable extinguishing media	:	Do not spread spilled material with high-pressure water streams.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products	:	Fire may produce irritating, corrosive and/or toxic gases. Carbon oxides Nitrogen oxides (NOx) Halogenated compounds

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Use personal protective equipment. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Ensure adequate ventilation. If it can be safely done, stop the leak. Do not touch or walk through the spilled material. Never return spills in original containers for re-use. Mark the contaminated area with signs and prevent access to unauthorized personnel. Only qualified personnel equipped with suitable protective equipment may intervene.

6.2 Environmental precautions

Environmental precautions	:	Prevent product from entering drains. 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	:	Wipe up with absorbent material (e.g. cloth, fleece). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	For personal protection see section 8. Smoking, eating and drinking should be prohibited in the ap-

plication area.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : General industrial hygiene practice.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.

Further information on storage conditions : Protect against strong heat, frost and excessive sunlight.

Advice on common storage : No materials to be especially mentioned.

Storage class (TRGS 510) : 10

Recommended storage temperature : 5 - 35 °C

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : The product may be used as adjuvant for plant protection products only.
Use only in accordance with the instruction manual.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-	25322-68-3	AGW (Inhalable fraction)	200 mg/m3	DE TRGS 900
	Peak-limit: excursion factor (category): 2;(II)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		AGW (Inhalable fraction)	1.000 mg/m3	DE TRGS 900
	Peak-limit: excursion factor (category): 8;(II)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			

		AGW (Inhalable fraction)	1.000 mg/m3	DE TRGS 900
	Peak-limit: excursion factor (category): 8;(II)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		MAK (inhalable fraction)	250 mg/m3	DE DFG MAK
	Further information: Damage to the embryo or foetus is unlikely when the MAK value or the BAT value is observed			

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

Substance name	End Use	Exposure routes	Potential health effects	Value
3-hydroxy-N-(o-tolyl)-4-[(2,4,5-trichloro-phenyl)azo]naphthalene-2-carboxamide	Workers	Inhalation	Long-term systemic effects	49 mg/m3
	Workers	Dermal	Long-term systemic effects	42 mg/kg
	Consumers	Dermal	Long-term systemic effects	25 mg/kg
	Consumers	Oral	Long-term systemic effects	25 mg/kg
Tridecanol, branched, ethoxylated	Workers	Inhalation	Long-term systemic effects	294 mg/m3
	Workers	Dermal	Long-term systemic effects	2080 mg/kg
	Consumers	Inhalation	Long-term systemic effects	87 mg/m3
	Consumers	Dermal	Long-term systemic effects	1250 mg/kg
	Consumers	Oral	Long-term systemic effects	25 mg/kg
Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-	Workers	Inhalation	Long-term systemic effects	40,2 mg/m3
	Workers	Dermal	Long-term systemic effects	112 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	7,14 mg/m3
	Consumers	Oral	Long-term systemic effects	40 mg/kg bw/day
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Workers	Inhalation	Long-term local effects	0,02 mg/m3
	Workers	Inhalation	Acute local effects	0,04 mg/m3
	Consumers	Inhalation	Long-term local ef-	0,02 mg/m3

			fects	
	Consumers	Inhalation	Acute local effects	0,04 mg/m3
	Consumers	Oral	Long-term systemic effects	0,09 mg/kg
	Consumers	Oral	Acute systemic effects	0,11 mg/kg

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

Substance name	Environmental Compartment	Value
Tridecanol, branched, ethoxylated	Fresh water	0,074 mg/l
	Intermittent use/release	0,015 mg/l
	Marine water	0,0074 mg/l
	Sewage treatment plant	1,4 mg/l
	Marine sediment	0,06 mg/kg dry weight (d.w.)
	Fresh water sediment	0,604 mg/kg dry weight (d.w.)
	Soil	0,1 mg/kg dry weight (d.w.)
Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-	Fresh water	273 mg/l
	Intermittent use/release	1 mg/l
	Marine water	27,3 mg/l
	Intermittent use/release	0,1 mg/l
	Fresh water sediment	1030 mg/kg dry weight (d.w.)
	Marine sediment	103 mg/kg dry weight (d.w.)
	Soil	46,4 mg/kg dry weight (d.w.)
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Fresh water	0,00339 mg/l
	Intermittent use/release	0,00339 mg/l
	Marine water	0,00339 mg/l
	Sewage treatment plant	0,23 mg/l
	Fresh water sediment	0,027 mg/kg
	Marine sediment	0,027 mg/kg

8.2 Exposure controls

Personal protective equipment

Eye/face protection : Eye wash bottle with pure water
Tightly fitting safety goggles

Hand protection
Material : Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection	:	Protective suit Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Respiratory protection	:	In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.
Protective measures	:	Plan first aid action before beginning work with this product. Always have on hand a first-aid kit, together with proper instructions. Wear suitable protective equipment. When using do not eat, drink or smoke. In the context of professional plant protection use as recommended, the end user must refer to the label and the instructions for use.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	red
Odour	:	No data available
Melting point/freezing point	:	not determined
Boiling point/boiling range	:	not determined
Upper explosion limit / Upper flammability limit	:	not determined
Lower explosion limit / Lower flammability limit	:	not determined
Flash point	:	not determined
Auto-ignition temperature	:	not determined
Decomposition temperature	:	not determined

pH	:	7 - 8 (20 °C) Concentration: 1 %
Viscosity		
Viscosity, kinematic	:	not determined
Solubility(ies)		
Water solubility	:	dispersible
Partition coefficient: n-octanol/water	:	Not available for this mixture.
Vapour pressure	:	Not available for this mixture.
Density	:	1,15 g/cm3 (20 °C)
Relative vapour density	:	Not available for this mixture.
Particle characteristics		
Assessment	:	This substance/ mixture contains nanoforms
Particle size	:	Further particle properties for nanomaterials see section 3

9.2 Other information

Oxidizing properties	:	Non-oxidizing
Flammability (liquids)	:	Not applicable
Self-ignition	:	not determined

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Stable under recommended storage conditions.
No hazards to be specially mentioned.

10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.
Protect from frost, heat and sunlight.

10.5 Incompatible materials

Materials to avoid : Avoid strong acids, bases, and oxidizers

10.6 Hazardous decomposition products

Stable under recommended storage conditions.

SECTION 11: Toxicological information

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

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Components:

Tristyrylphenol ethoxylates:

Acute oral toxicity : LD50 (Rat, male and female): > 5.000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

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

Tridecanol, branched, ethoxylated:

Acute oral toxicity : Assessment: The component/mixture is moderately toxic after single ingestion.

Acute inhalation toxicity : LC0 (Rat): > 1,6 mg/l

Exposure time: 4 h
Test atmosphere: dust/mist
Remarks: no mortality

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 402
Remarks: no mortality

2-methylisothiazol-3(2H)-one:

Acute oral toxicity : LD50 (Rat, male): 232 - 249 mg/kg
Method: OPPTS 870.1100

LD50 (Rat, female): 120 mg/kg
Method: OPPTS 870.1100

Acute inhalation toxicity : LC50 (Rat, male and female): 0,11 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat, male and female): 242 mg/kg
Method: OECD Test Guideline 402

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Acute oral toxicity : LD50 Oral (Rat, female): 200 mg/kg
Method: OECD Test Guideline 423

Acute inhalation toxicity : LC50 (Rat, male and female): 0,33 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: Corrosive to the respiratory tract.

Acute dermal toxicity : LD50 (Rabbit, male): 87 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:

Tristyrylphenol ethoxylates:

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

Tridecanol, branched, ethoxylated:

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

2-methylisothiazol-3(2H)-one:

Species	:	Rabbit
Exposure time	:	4 h
Method	:	OECD Test Guideline 404
Result	:	Corrosive after 4 hours or less of exposure

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Method	:	OECD Test Guideline 404
Result	:	Corrosive after 1 to 4 hours of exposure

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

Tristyrylphenol ethoxylates:

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

Tridecanol, branched, ethoxylated:

Result	:	Irreversible effects on the eye

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Result	:	Irreversible effects on the eye

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Components:

Tridecanol, branched, ethoxylated:

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

2-methylisothiazol-3(2H)-one:

Test Type	:	Buehler Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	Buehler Test

Result	:	Causes skin sensitization.
Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact
Species	:	Mouse
Result	:	Causes skin sensitization.
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Causes skin sensitization.

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Test Type	:	Local lymph node assay (LLNA)
Species	:	Mouse
Result	:	The product is a skin sensitiser, sub-category 1A.

Germ cell mutagenicity

Not classified based on available information.

Components:

Tristyrylphenol ethoxylates:

Genotoxicity in vitro	:	Test Type: reverse mutation assay Method: OECD Test Guideline 471 Result: negative
Genotoxicity in vivo	:	Remarks: No data available

Tridecanol, branched, ethoxylated:

Genotoxicity in vitro	:	Test Type: reverse mutation assay Method: OECD Test Guideline 471 Result: negative

2-methylisothiazol-3(2H)-one:

Genotoxicity in vitro	:	Test Type: reverse mutation assay Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay) Result: negative Test Type: Chromosome aberration test in vitro Test system: Chinese hamster ovary cells Method: OECD Test Guideline 473 Result: equivocal Test Type: gene mutation test Test system: Chinese hamster ovary cells Method: OECD Test Guideline 476 Result: negative

Test Type: Chromosome aberration test in vitro
Test system: Human lymphocytes
Method: OECD Test Guideline 473
Result: negative

Genotoxicity in vivo : Test Type: unscheduled DNA synthesis assay
Species: Rat (male)
Application Route: Oral
Method: OECD Test Guideline 486
Result: negative

Test Type: Micronucleus test
Species: Mouse (male and female)
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

Components:

Tridecanol, branched, ethoxylated:

Effects on fertility : Test Type: Two-generation study
Species: Rat
Application Route: Dermal
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Oral
Method: OECD Test Guideline 414
Result: negative

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

Tridecanol, branched, ethoxylated:

Species : Rat
NOAEL : 500 mg/kg
Application Route : Oral
Exposure time : 90 days

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Species	:	Dog
NOAEL	:	22 mg/kg
Application Route	:	Oral
Species	:	Rat
NOAEL	:	16,3 - 24,7 mg/kg
Application Route	:	Skin contact
Species	:	Rat
NOAEL	:	2.36 mg/m³
Application Route	:	Inhalation

Aspiration toxicity

Not classified based on available information.

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 : No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

Tristyrylphenol ethoxylates:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): 21 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to microorganisms :
Remarks: No data available

Tridecanol, branched, ethoxylated:

Toxicity to fish : LL50 (Danio rerio (zebra fish)): 2,5 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1,5 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : NOELR (Desmodesmus subspicatus (green algae)): 2,3 mg/l
Exposure time: 72 h

EL50 (Desmodesmus subspicatus (green algae)): 2,5 mg/l
Exposure time: 72 h

Toxicity to microorganisms : EC50 (Anabaena flos-aquae (cyanobacterium)): 0,356 - 0,979 mg/l
Exposure time: 72 h

EC50 (Natural microorganism): 10.000 mg/l
Exposure time: 16,9 h

2-methylisothiazol-3(2H)-one:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 4,77 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 0,934 mg/l
Exposure time: 48 h
Test Type: flow-through test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 0,138 mg/l
Exposure time: 120 h
Test Type: static test
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 0,050 mg/l
Exposure time: 120 h
Test Type: static test
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 10

Toxicity to microorganisms : EC50 (activated sludge): 41 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity) : NOEC: 2,38 mg/l
Exposure time: 98 d
Species: Oncorhynchus mykiss (rainbow trout)
Method: OECD Test Guideline 210

LOEC: 4,93 mg/l
Exposure time: 98 d
Species: Oncorhynchus mykiss (rainbow trout)
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,044 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: flow-through test
Method: OECD Test Guideline 211

LOEC: 0,089 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: flow-through test
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : 1

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,19 mg/l
Exposure time: 96 h
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,16 mg/l
Exposure time: 48 h

NOEC (Daphnia magna (Water flea)): 0,1 mg/l
Exposure time: 21 d

EC50 (Daphnia magna (Water flea)): 0,18 mg/l
Exposure time: 21 d

Toxicity to algae/aquatic plants : NOEC (Skeletonema costatum (marine diatom)): 0,00049 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 201

NOEC (Skeletonema costatum (marine diatom)): 0,019 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

EC50 (Skeletonema costatum (marine diatom)): 0,037 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 100

Toxicity to microorganisms : NOEC (activated sludge): 0,91 mg/l

Exposure time: 3 h
Method: OECD Test Guideline 209
GLP: yes

EC50 (activated sludge): 4,5 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
GLP: yes

Toxicity to fish (Chronic toxicity) : NOEC: 0,02 mg/l
Exposure time: 35 d
Species: Danio rerio (zebra fish)
Method: OECD Test Guideline 210
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,1 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

Chronic Toxicity Value: 0,18 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic toxicity) : 100

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data is available on the product itself.

Components:

Tristyrylphenol ethoxylates:

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

Tridecanol, branched, ethoxylated:

Biodegradability : Result: Readily biodegradable.

2-methylisothiazol-3(2H)-one:

Biodegradability : Biodegradation: 50 %
Exposure time: 29 d

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Biodegradability : Result: Readily biodegradable.

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data is available on the product itself.

Components:

Tristyrylphenol ethoxylates:

Partition coefficient: n-octanol/water : Remarks: No data available

Tridecanol, branched, ethoxylated:

Partition coefficient: n-octanol/water : log Pow: 4,73 (25 °C)

2-methylisothiazol-3(2H)-one:

Bioaccumulation : Exposure time: 5 d
Bioconcentration factor (BCF): 48,1

Partition coefficient: n-octanol/water : log Pow: -0,486 (20 °C)

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Bioaccumulation : Exposure time: 28 d
Bioconcentration factor (BCF): < 54
Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : Pow: 0,75

12.4 Mobility in soil

Product:

Distribution among environmental compartments : Remarks: No data is available on the product itself.

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 consid-

ered 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 : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Do not re-use empty containers.
Packaging that is not properly emptied must be disposed of as the unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number or ID number

ADN : Not regulated as a dangerous good

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.2 UN proper shipping name

ADN : Not regulated as a dangerous good

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADN	:	Not regulated as a dangerous good
ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.4 Packing group

ADN	:	Not regulated as a dangerous good
ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA (Cargo)	:	Not regulated as a dangerous good
IATA (Passenger)	:	Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Remarks	:	Not classified as dangerous in the meaning of transport regulations.

14.7 Maritime transport in bulk according to IMO instruments

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, 3 3-hydroxy-N-(o-tolyl)-4-[(2,4,5-trichlorophenyl)azo]naphthalene-2-carboxamide (Number on list 75) If you intend to use this product as tattoo ink, please contact your vendor.
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.		Not applicable
Water hazard class (Germany)	:	WGK 3 highly hazardous to water Classification according to AwSV, Annex 1 (5.2)
TA Luft List (Germany)	:	5.2.1: Total dust: Not applicable 5.2.2: Inorganic substances in powdered form: Not applicable 5.2.4: Inorganic substances in gaseous form: Not applicable 5.2.5: Organic Substances: Not applicable 5.2.7.1.1: Carcinogenic substance: Not applicable 5.2.7.1.1: Quartz fine dust PM4: Not applicable 5.2.7.1.1: Formaldehyde: Not applicable 5.2.7.1.1: fibres: Not applicable 5.2.7.1.2: Germ cell mutagens: Not applicable 5.2.7.1.3: Substances toxic to reproduction: Not applicable 5.2.7.2: Poorly degradable, easily enrichable and highly toxic organic substances: Not applicable

Other regulations:

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

The components of this product are reported in the following inventories:

TCSI	:	On the inventory, or in compliance with the inventory

TSCA	:	Product contains substance(s) not listed on TSCA inventory.
AIIC	:	Not in compliance with the inventory
DSL	:	This product contains the following components listed on the Canadian NDSL. All other components are on the Canadian DSL. 2,2-dibromo-2-cyanoacetamide
ENCS	:	Not in compliance with the inventory
ISHL	:	Not in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
NZIoC	:	Not in compliance with the inventory
TECI	:	On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this mixture.

SECTION 16: Other information

Full text of H-Statements

H301	:	Toxic if swallowed.
H302	:	Harmful if swallowed.
H310	:	Fatal in contact with skin.
H311	:	Toxic in contact with skin.
H314	:	Causes severe skin burns and eye damage.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H330	:	Fatal if inhaled.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.
EUH071	:	Corrosive to the respiratory tract.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Skin Corr.	:	Skin corrosion
Skin Sens.	:	Skin sensitisation

DE DFG MAK	:	Germany. MAK BAT Annex IIa
DE TRGS 900	:	Germany. TRGS 900 - Occupational exposure limit values.
DE DFG MAK / MAK	:	MAK value
DE TRGS 900 / AGW	:	Time Weighted Average

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 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:**
Eye Irrit. 2	H319	Calculation method
Skin Sens. 1	H317	Calculation method
Aquatic Chronic 3	H412	Calculation method

Disclaimer
FMC Corporation believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. You can contact FMC Corporation to ensure that this document is the most current available from FMC Corporation. No warranty of fitness for any particular purpose, warranty of merchantability or any other warranty, expressed or implied, is made concerning the information provided herein. The information provided herein relates only to the specified product designated and may not be applicable where such product is used in combination with

any other materials or in any process. The user is responsible for determining whether the product is fit for a particular purpose and suitable for the user's conditions and methods of use. Since the conditions and methods of use are beyond the control of FMC Corporation, FMC Corporation expressly disclaims any and all liability as to any results obtained or arising from any use of the products or reliance on such information.

Prepared by

FMC Corporation

FMC and the FMC Logo are trademarks of FMC Corporation and/or an affiliate.

© 2021-2024 FMC Corporation. All Rights Reserved.

DE / 6N