COLORANT RED CALCE VENEZIANA

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

1.1 Product identifier: Colorant Red Calce Veneziana

1.2 Relevant identified uses of the substance or mixture and uses advised against:
Relevant uses: Colorant.
Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

Coverit Srl
Strada Marchesane, 123
36061 Bassano del Grappa VI - Italia
tel. +39 0424 500507 - fax +39 0424 500110
Information: +39 0424 500507 (ore: 08.00-12.00 e 14.00-18.00)
e-mail: info@coverit.it
web: www.coverit.it
Emergency telephone number: Reception 00390424500507

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:
CLP Regulation (EC) No 1272/2008:
The product is not classified as hazardous according to CLP Regulation (EC) No 1272/2008.

2.2 Label elements:
CLP Regulation (EC) No 1272/2008:
Hazard statements:
Non-applicable
Precautionary statements:
Non-applicable
Supplementary information:
EUH210 Safety data sheet available on request.
EUH208 Contains 1,2-Benzisothiazol-3(2H)-one, 5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1). May produce an allergic reaction.

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.
No hazards to be specially mentioned.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture:

Components: Organic pigments in aqueous dispersion.

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
1,2-Benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6	Acute Tox. 4; H302 Acute Tox. 2; H330 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411 Aquatic Chronic 1; H410	>= 0,025 - < 0,05
2-Methylisothiazolin-3-one	2682-20-4 220-239-6	Acute Tox. 2; H330 Acute Tox. 3; H301 Skin Corr. 1B; H314 Skin Sens. 1A; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411 Eye Dam./Irrit. 1; H318	>= 0,025 - < 0,1
5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-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 Skin Sens. 1A; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 0,0002 - < 0,0015

4. FIRST AID MEASURES

4.1. Description of first aid measures

General information
Get medical advice/ attention if you feel unwell.
If inhaled:
Move the victim to fresh air.
If you feel unwell, seek medical advice (show the label where possible).
In case of skin contact
IF ON SKIN: Wash with plenty of soap and water.
In case of eye contact
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
If swallowed
If swallowed, seek medical advice immediately and show this container or label.

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

Symptoms
None known.
Hazards
None known.

4.3. Indication of any immediate medical attention and special treatment needed
Treatment
Treat symptomatically.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media
Suitable extinguishing media
Water spray jet
Dry powder
Carbon dioxide (CO2)
Alcohol-resistant foam
Unsuitable extinguishing media
High volume water jet

5.2. Special hazards arising from the substance or mixture
Specific hazards during firefighting:
In case of fire hazardous decomposition products may be produced such as:
Carbon oxides
Nitrogen oxides (NOx)
Hydrogen chloride

5.3. Advice for firefighters
Special protective equipment for firefighting
Self-contained breathing apparatus
Further information
Wear suitable protective equipment.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Personal precautions:
Wear suitable protective equipment.

6.2. Environmental precautions
Environmental precautions:
The product should not be allowed to enter drains, water courses or the soil.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up:
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Treat recovered material as described in the section "Disposal considerations".

6.4. Reference to other sections
Information regarding Safe handling, see chapter 7.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling
Advice on safe handling
not required under normal use
Advice on protection against fire and explosion:
Normal measures for preventive fire protection.
Hygiene measures
Wash hands before breaks and at the end of workday.
Use protective skin cream before handling the product.

Take off immediately all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions

Keep containers tightly closed in a cool, well-ventilated place.
Handle and open container with care.
Keep away from flames and sparks.

7.3. Specific end use(s)

Specific use(s):

No further recommendations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

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

Substance name	End Use	Exposure routes	Potential health effects	Value
C.I. Pigment Red 122 CAS-No.: 980-26-7	Workers	Dermal	Long-term systemic effects	42 mg/kg bw/day
Remarks:	DNEL			
	Workers	Inhalation	Long-term systemic effects	147 mg/m3
Remarks:	DNEL			
	Workers	Inhalation	Long-term local effects	3 mg/m3
Remarks:	DNEL			
	General population	Dermal	Long-term systemic effects	25 mg/kg bw/day
Remarks:	DNEL			
	General population	Oral	Long-term systemic effects	25 mg/kg bw/day
Remarks:	DNEL			
C.I. Pigment Red 112 CAS-No.: 6535-46-2	Workers	Dermal	Long-term systemic effects	42 mg/kg bw/day
Remarks:	DNEL			
	Workers	Inhalation	Long-term systemic effects	49 mg/m3
Remarks:	DNEL			
	Workers	Inhalation	Long-term local effects	3 mg/m3
Remarks:	DNEL			
	General population	Dermal	Long-term systemic effects	25 mg/kg bw/day
Remarks:	DNEL			
	General population	Oral	Long-term systemic effects	25 mg/kg bw/day
Remarks:	DNEL			
Dolomite CAS-No.: 16389-88-1	Workers	Inhalation	Long-term systemic effects	10 mg/m3
Remarks:	DNEL			

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

Substance name	Environmental Compartment	Value
5-Chloro-2-methyl-2,3- dihydroisothiazol-3-one and 2- Methyl-2,3-dihydroisothiazol-3- one (3:1) CAS-No.: 55965-84-9	Fresh water	0,049 µg/l
	Marine water	0,0098 µg/l
	Sewage treatment plant	0,045 µg/l
	Soil	0,009 µg/l

8.2. Exposure controls

Engineering measures

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

Engineering measures

Skin and body protection:

Wear suitable protective equipment.

Respiratory protection:

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Protective measures:

Wear suitable protective equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES OF THE SUBSTANCE

9.1 Information on basic physical and chemical properties:

Physical state:	liquid
Form:	liquid
Colour:	red
Odour:	not significant
Odour threshold:	not required
pH value:	*7,5 (20 °C)*
Boiling point:	ca. 100 °C
Melting point:	Not applicable
Flash point:	> 100 °C
Evaporation rate:	not determined
Flammability:	not determined
Lower explosion limit.	not determined
Upper explosive limit:	not determined
Combustion number:	not applicable
Minimum ignition energy:	not determined
Vapour pressure:	not determined
Vapour density relative to air:	not determined
Relative Density:	no data available
Solubility in water:	dispersion
Octanol/water partition coefficient (log Pow):	not determined
Ignition temperature:	not determined
Thermal decomposition:	> 100 °C
Viscosity (dynamic):	450 mPa.s (23 °C) Method: DIN 53019
Oxidizing properties:	no data available

9.2. Other information

Density: 1,25 g/cm3 (20 °C)
Method: DIN EN ISO 2811

10. STABILITY AND REACTIVITY

10.1 Reactivity
No dangerous reaction known under conditions of normal use.

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.
Stable

10.4 Conditions to avoid
Conditions to avoid:
None known.

10.5 Incompatible materials
Materials to avoid:
no data available

10.6 Hazardous decomposition products
No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
11.1.1 Acute toxicity
Product:
Acute oral toxicity:
Remarks: no data available

Components:
1,2-Benzisothiazol-3(2H)-one:
Acute oral toxicity: LD50 (Rat, male and female): 670 - 784 mg/kg
Method: OECD Test Guideline 401
GLP: yes
Acute inhalation toxicity:
LC50 (Rat, male and female): 0,5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OPPTS 870.1300
GLP: yes
Acute dermal toxicity: LD50 (Rat, male and female): > 2.000 mg/kg
GLP: yes

2-Methylisothiazolin-3-one:
Acute oral toxicity: LD50 (Rat): 50 - 300 mg/kg
Acute inhalation toxicity: LC50 (Rat): 0,00053 mg/l
Exposure time: 4 h
Acute dermal toxicity: LD50 (Rat): > 2.000 mg/kg

5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1):
Acute oral toxicity: LD50 (Rat): 64 mg/kg
Acute inhalation toxicity: LC50 (Rat, male and female): 0,171 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Acute dermal toxicity: LD50 (Rabbit): 92,4 mg/kg

11.1.2 Skin corrosion/irritation

Product:
Remarks: no data available

Components:
1,2-Benzisothiazol-3(2H)-one:
Species: Rabbit
Exposure time: 4 h
Result: Skin irritation
GLP: yes

2-Methylisothiazolin-3-one:
Species: Rabbit
Result: corrosive

5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1):
Species: Rabbit
Result: Corrosive after 1 to 4 hours of exposure

11.1.3 Serious eye damage/eye irritation
Product:
Remarks: no data available

Components:
1,2-Benzisothiazol-3(2H)-one:
Species: rabbit eye
Exposure time: 2,9 h - 11 d
Result: Eye irritation
GLP: yes

2-Methylisothiazolin-3-one:
Species: rabbit eye
Result: Risk of serious damage to eyes.

5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one(3:1):
Species: rabbit eye
Result: Risk of serious damage to eyes.

11.1.4 Respiratory or skin sensitisation
Product:
Remarks: no data available

Components:
1,2-Benzisothiazol-3(2H)-one:
Test Type: Guinea pig maximization test
Exposure routes: Dermal
Species: Guinea pig
Method: Other
Result: Causes sensitisation.
GLP: yes

2-Methylisothiazolin-3-one:
Test Type: Mouse local lymphnode assay
Exposure routes: Dermal
Species: Mouse
Method: OECD Test Guideline 429
Result: Causes sensitisation.

5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1):
Species: Guinea pig

Method: Other
Result: The product is a skin sensitiser, sub-category 1A.
Assessment: Toxic if swallowed., Fatal in contact with skin., Fatal if inhaled., Causes severe skin burns and eye damage.
May cause an allergic skin reaction.

11.1.5 Germ cell mutagenicity
Product:
Genotoxicity in vitro: Remarks: no data available
Germ cell mutagenicity-Assessment: No information available.

Components:
1,2-Benzisothiazol-3(2H)-one:
Genotoxicity in vitro: Test Type: Mouse lymphoma assay
Test system: mouse lymphoma cells
Concentration: 0,1 - 12,8 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes
Test Type: Ames test
Test system: Salmonella typhimurium
Concentration: 0,064 - 200 µg/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes
Test Type: Chromosome aberration test in vitro
Test system: Human lymphocytes
Concentration: 1 - 40 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: positive
GLP: yes
Genotoxicity in vivo: Test Type: Other
Species: Rat (male)
Strain: wistar
Cell type: Liver cells
Application Route: Ingestion
Exposure time: single dose
Dose: 560 - 1400 mg/kg
Method: OECD Test Guideline 486
Result: negative
GLP: yes
Test Type: Micronucleus test
Species: Mouse (male and female)
Strain: CD1
Cell type: Bone marrow
Application Route: Ingestion
Exposure time: single dose
Dose: 125-250-500-1000-2000-5000mg/k
Method: OECD Test Guideline 474
Result: negative
GLP: yes
Germ cell mutagenicity-Assessment: It is concluded that the product is not mutagenic based on evaluation of several mutagenicity tests.

2-Methylisothiazolin-3-one:
Genotoxicity in vitro: Test Type: Ames test
Metabolic activation: with and without metabolic activation

Result: negative
Test Type: Chromosome aberration test in vitro
Test system: mammalian cells
Metabolic activation: with and without metabolic activation
Result: negative
Test Type: Micronucleus test
Test system: mammalian cells
Metabolic activation: with and without metabolic activation
Result: negative
Germ cell mutagenicity-Assessment: It is concluded that the product is not mutagenic based on evaluation of several mutagenicity tests.

5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1):
Genotoxicity in vitro: Test Type: In vitro study
Metabolic activation: with and without metabolic activation
Result: Conflicting results have been seen in different studies.
Genotoxicity in vivo: Test Type: Micronucleus test
Species: Rat
Cell type: Bone marrow
Application Route: Oral
Exposure time: <= 5 d
Dose: 1-5 x <= 28 mg/kg
Result: negative
Test Type: Micronucleus test
Species: Mouse
Application Route: Oral
Exposure time: <= 5 d
Dose: 1-5 x <= 20 - 30 mg/kg
Result: negative
Germ cell mutagenicity-Assessment: In vitro tests showed mutagenic effects which were not observed with in vivo test.

11.1.6 Carcinogenicity
Product:
Carcinogenicity -Assessment: No information available.

Components:
1,2-Benzisothiazol-3(2H)-one:
Carcinogenicity -Assessment: Not applicable

2-Methylisothiazolin-3-one:
Carcinogenicity -Assessment: No information available.

5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1):
Carcinogenicity -Assessment: No evidence of carcinogenicity in animal studies.

11.1.7 Reproductive toxicity
Product:
Reproductive toxicity -Assessment: No information available.

Components:
1,2-Benzisothiazol-3(2H)-one:
Effects on fertility: Species: Rat, male
Application Route: oral (feed)
Dose: 18,5 - 97,8 mg/kg
General Toxicity - Parent: NOAEL: 18,5 mg/kg body weight
General Toxicity F1: NOAEL: 48 mg/kg body weight
Method: Other
GLP: yes
Species: Rat, female
Application Route: oral (feed)

Dose: 27,0 - 114,8 mg/kg
General Toxicity - Parent: NOAEL: 27 mg/kg body weight
General Toxicity F1: NOAEL: 56,6 mg/kg body weight
Method: Other
GLP: yes

Effects on foetal development: Species: Rat, female
Application Route: oral (gavage)
Dose: 10 - 40 - 100 mg/kg
General Toxicity Maternal: NOAEL: 10 mg/kg body weight
Teratogenicity: NOAEL: 40 mg/kg body weight
Method: Directive 67/548/EEC, Annex V, B.31.
GLP: yes
Reproductive toxicity -Assessment: Weight of evidence does not support classification for reproductive toxicity
Embryotoxicity classification not possible from current data.

2-Methylisothiazolin-3-one:
Effects on fertility: Remarks: This information is not available.
Effects on foetal development: Remarks: By analogy with a product of similar composition
Based on available data, the classification criteria are not met.
Reproductive toxicity -Assessment: No teratogenic effects to be expected.

5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1):
Effects on fertility: Species: Rat, male and female
Application Route: Drinking water
Dose: 25 - 75 - 225 ppm
General Toxicity - Parent: NOAEL: 16,3 - 24,7 mg/kg bodyweight
General Toxicity F1: NOAEL: 16,3 - 24,7 mg/kg body weight
Method: Other
GLP: yes
Species: Rat, male and female
Application Route: Drinking water
Dose: 30 - 100 - 300 ppm
General Toxicity - Parent: NOAEL: 2,8 - 4,4 mg/kg bodyweight
General Toxicity F1: NOAEL: 22,7 - 28 mg/kg body weight
General Toxicity F2: NOAEL: 35,7 - 39,1 mg/kg body weight
Method: OECD Test Guideline 416
GLP: yes
Effects on foetal development: Species: Rat, male and female
Application Route: oral (gavage)
Dose: <= 15 mg/kg
Developmental Toxicity: NOAEL: 15 mg/kg body weight
Method: Other
Species: Rat, male and female
Application Route: oral (gavage)
General Toxicity Maternal: NOAEL: <= 3,95 mg/kg bodyweight
Method: Other
Reproductive toxicity -Assessment: Weight of evidence does not support classification for reproductive toxicity
Embryotoxicity classification not possible from current data.

11.8 STOT - single exposure
Product:
Remarks: no data available

Components:
1,2-Benzisothiazol-3(2H)-one:
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

2-Methylisothiazolin-3-one:

Remarks: no data available

5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1):
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

11.9 STOT - repeated exposure
Product:
Remarks: no data available

Components:
1,2-Benzisothiazol-3(2H)-one:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

2-Methylisothiazolin-3-one:
Remarks: no data available

5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1):
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

11.1.10 Repeated dose toxicity
Product:
Remarks: This information is not available.

Components:
1,2-Benzisothiazol-3(2H)-one:
Species : Dog, male and female
NOAEL : 5 mg/kg
LOAEL : 20 mg/kg
Application Route : oral (gavage)
Exposure time : 90 d
Number of exposures : daily
Dose : 5 - 20 - 50 mg/kg
Group : yes
Method : 88/302/EC
GLP : yes

2-Methylisothiazolin-3-one:
Species : Rat
NOAEL : 25 mg/kg
Application Route : Oral
Exposure time : 90 d
Remarks : By analogy with a product of similar composition

5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1):
Species : Rat, male and female
NOAEL : 16,3 - 24,7 mg/kg
Application Route : Drinking water
Exposure time : 90 d
Number of exposures : daily
Dose : 25 - 75 - 225 ppm
Group : yes
Method : Other
GLP : yes

11.1.11 Aspiration toxicity
Product:
no data available

Components:
1,2-Benzisothiazol-3(2H)-one:
No aspiration toxicity classification

2-Methylisothiazolin-3-one:
No aspiration toxicity classification

5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1):
No aspiration toxicity classification

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Product:
Toxicity to fish: Remarks: no data available
Toxicity to daphnia and other aquatic invertebrates: Remarks: no data available
Toxicity to algae: Remarks: no data available
Toxicity to fish (Chronic toxicity): Remarks: no data available
Toxicity to microorganisms: Remarks: no data available

Components:
1,2-Benzisothiazol-3(2H)-one:
Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): 2,18 mg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes
LC50 (Cyprinodon variegatus (sheepshead minnow)): approx. 16,7 mg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: No information available.
GLP: yes
Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 2,94 mg/l
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes
EC0 (Daphnia magna (Water flea)): 0,643 mg/l
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes
EC50 (Mysidopsis bahia (opossum shrimp)): 0,9893 mg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: Other
GLP: yes
Remarks: salt water
NOEC (Mysidopsis bahia (opossum shrimp)): 0,25 mg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: Other
GLP: yes

Remarks: salt water
Toxicity to algae: EC50 (Selenastrum capricornutum (green algae)): 0,155 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes
NOEC (Selenastrum capricornutum (green algae)): 0,055 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes
Toxicity to microorganisms: EC50 (activated sludge of a predominantly domestic sewage):23 mg/l
End point: Bacteria toxicity (respiration inhibition)
Exposure time: 3 h
Test Type: aquatic
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.
EC50: > 811,5 mg/kg Trockengewicht mg/kg dry weight (d.w.)
Exposure time: 28 d
Test Type: Soil
Analytical monitoring: yes
Method: OECD 216
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.
NOEC : 263,7 mg/kg Trockengewicht mg/kg dry weight (d.w.)
Exposure time: 28 d
Test Type: Soil
Analytical monitoring: yes
Method: OECD 216
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to fish (Chronic toxicity): NOEC: 0,21 mg/l
Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)
Analytical monitoring: yes
Method: OECD Test Guideline 215
GLP: yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC: 1,2 mg/l
End point: Reproduction rate
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Analytical monitoring: yes
Method: OECD Test Guideline 211
GLP: yes
NOEC: 1,9 mg/l
End point: Reproduction rate
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Analytical monitoring: yes
Method: OECD Test Guideline 211
GLP: yes

Toxicity to soil dwelling organisms: Test Type: artificial soil
LC50: > 410,6 mg/kg
Exposure time: 14 d

End point: mortality
Species: Eisenia fetida (earthworms)
Method: OECD Test Guideline 207
GLP:yes
Remarks: The details of the toxic effect relate to the nominal concentration.
Test Type: artificial soil
NOEC: 234,5 mg/kg
Exposure time: 14 d
End point: mortality
Species: Eisenia fetida (earthworms)
Method: OECD Test Guideline 207
GLP:yes
Remarks: The details of the toxic effect relate to the nominal concentration.

Plant toxicity: EC50: 340 mg/kg
Exposure time: 20 d
End point: Growth
Species: Phaseolus vulgaris
Analytical monitoring: yes
Method: OECD Guide-line 208
GLP:yes
Remarks: The details of the toxic effect relate to the nominal concentration.
NOEC: 90 mg/kg
Exposure time: 20 d
End point: Growth
Species: Phaseolus vulgaris
Analytical monitoring: yes
Method: OECD Guide-line 208
GLP:yes
Remarks: The details of the toxic effect relate to the nominal concentration.
EC50: 300 mg/kg
Exposure time: 19 d
End point: Growth
Species: Triticum aestivm (wheat)
Analytical monitoring: yes
Method: OECD Guide-line 208
GLP:yes
Remarks: The details of the toxic effect relate to the nominal concentration.
NOEC: 51 mg/kg
Exposure time: 19 d
End point: Growth
Species: Triticum aestivm (wheat)
Analytical monitoring: yes
Method: OECD Guide-line 208
GLP:yes
Remarks: The details of the toxic effect relate to the nominal concentration.

Sediment toxicity: Remarks: not available

2-Methylisothiazolin-3-one:

Toxicity to fish: LC50 (Danio rerio (zebra fish)): > 150 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 0,87 mg/l
Exposure time: 48 h

Toxicity to algae: IC50 (Pseudokirchneriella subcapitata (green algae)): 0,157 mg/l
Exposure time: 72 h
NOEC (Pseudokirchneriella subcapitata (green algae)):0,0104 mg/l
Exposure time: 96 h

M-Factor (Acute aquatic toxicity): 10

Toxicity to microorganisms: EC50 (Bacteria): 31,7 mg/l
Exposure time: 3 h

Toxicity to fish (Chronic toxicity): Remarks: no data available
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): Remarks: no data available
Toxicity to soil dwelling organisms: Remarks: Not applicable
Plant toxicity: Remarks: Not applicable
Sediment toxicity: Remarks: Not applicable
Toxicity to terrestrial organisms: Remarks: Not applicable

5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1):
Toxicity to fish: EC50 (Oncorhynchus mykiss (rainbow trout)): 0,22 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 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Toxicity to algae: EC50 (Skeletonema costatum (marine diatom)): 0,0052 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 201
NOEC (Skeletonema costatum (marine diatom)): 0,00049 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 201
Toxicity to microorganisms: EC50 (activated sludge): 7,92 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Toxicity to fish (Chronic toxicity): NOEC: 0,098 mg/l
Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)
Method: OECD Test Guideline 215
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC: 0,004 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 202
Toxicity to soil dwelling organisms: LC50.86,6 mg/kg dry weight (d.w.)
Exposure time: 14 d
Species: Eisenia fetida (earthworms)
Method: OECD Test Guideline 207
NOEC:8,83 mg/kg dry weight (d.w.)
Exposure time: 14 d
Species: Eisenia fetida (earthworms)
Method: OECD Test Guideline 207

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

12.2 Persistence and degradability
Product:
Biodegradability: Remarks: no data available

Components:
1,2-Benzisothiazol-3(2H)-one:
Biodegradability: Test Type: aerobic
Inoculum: activated sludge
Concentration: 1 mg/l
Result: Partially biodegradable.
Exposure time: 63 d

Method: OECD Test Guideline 301C
GLP: yes
Physico-chemical removability: Remarks: Biodegradable
Stability in water: Test Type: abiotic
Degradation half life: 219 d
pH: 4
Hydrolysis: at 50 °C
Method: OECD Test Guideline 111
GLP: yes
Test Type: abiotic
Degradation half life: > 200 d
pH: 7
Hydrolysis: at 50 °C
Method: OECD Test Guideline 111
GLP: yes
Test Type: abiotic
Degradation half life: 145 d
pH: 9
Hydrolysis: at 50 °C
Method: OECD Test Guideline 111
GLP: yes
Photodegradation: Test Type: water
Light source: Xenon lamp
Light spectrum: 290 - 400 nm
Degradation (direct photolysis): < 1,5 %
GLP: yes
Test Type: air
Method: calculated
GLP: no
Remarks: Decomposes rapidly in contact with light.

2-Methylisothiazolin-3-one:
Biodegradability: Test Type: aerobic
Result: Not rapidly biodegradable

5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1):
Biodegradability: Test Type: aerobic
Inoculum: activated sludge
Result: Not rapidly biodegradable
Method: OECD Test Guideline 301B
Photodegradation: Test Type: water
Light source: Sunlight

12.3 Bioaccumulative potential
Product:
Bioaccumulation: Remarks: no data available

Components:
1,2-Benzisothiazol-3(2H)-one:
Bioaccumulation: Species: Lepomis macrochirus (Bluegill sunfish)
Exposure time: 56 d
Concentration: 0,1 mg/l
Bioconcentration factor (BCF): 6,62
Method: OECD Test Guideline 305
GLP: no
Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

2-Methylisothiazolin-3-one:
Bioaccumulation: Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1):
Bioaccumulation: Bioconcentration factor (BCF): 3,6
Method: calculated
Remarks: Does not accumulate in organisms.
Partition coefficient: n-octanol/water: log Pow: -0,71 - 0,75
Method: OECD Test Guideline 107

12.4 Mobility in soil
Components:
1,2-Benzisothiazol-3(2H)-one:
Distribution among environmental compartments: Adsorption/Soil
Medium: water - soil
Koc: 235 - 566
Method: Other

2-Methylisothiazolin-3-one:
Distribution among environmental compartments: Remarks: no data available

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

Components:
1,2-Benzisothiazol-3(2H)-one:
Assessment: the substance is not identified as a PBT or as a vPvB substance.

2-Methylisothiazolin-3-one:
Assessmen: Remarks: no data available

5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1):
Assessment: This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

12.6 Other adverse effects
Product:
Environmental fate and pathways: no data available
Additional ecological information: no data available

Components:
1,2-Benzisothiazol-3(2H)-one:
Environmental fate and pathways: not available
Additional ecological information: Do not allow to enter ground water, waterways or waste water.

2-Methylisothiazolin-3-one:
Environmental fate and pathways: no data available

5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-Methyl-2,3-dihydroisothiazol-3-one (3:1):
Additional ecological information: The product should not be allowed to enter drains, water courses or the soil.

13. DISPOSAL CONSIDERATION

13.1. Waste treatment methods
Product
Dispose of in accordance with the European Directives on waste and hazardous waste.
Uncleaned packaging
This material and its container must be disposed of in a safe way.

14. TRANSPORT INFORMATION

Section 14.1. to 14.5.
ADR not restricted
ADN not restricted
RID not restricted
IATA not restricted
IMDG not restricted

14.6. Special precautions for user
See sections 6 to 8 of this Safety Data Sheet.
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code (International Bulk Chemicals Code)
No transport as bulk according IBC - Code.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).: Not applicable
REACH - List of substances subject to authorisation (Annex XIV): Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable
Regulation (EC) No 850/2004 on persistent organic pollutants: Not applicable
Other regulations: Apart from the data/regulations specified in this chapter, no further information is available concerning safety, health and environmental protection.

15.2 Chemical safety assessment
No Chemical Safety Assessment (CSA) is yet available for the substance, or for the component substances, contained in this product.

16. OTHER INFORMATION

Legend
ADN
European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR
European Agreement concerning the International Carriage of Dangerous Goods by Road
AOX Adsorbable organic bound halogens
CAS Chemical Abstracts Service
DMEL Derived Minimal Effect Level (genotoxic substances)
DNEL Derived No Effect Level
EC50 Half maximal effective concentration
GHS Globally Harmonized System
IATA International Air Transport Association
IMDG International Maritime Dangerous Goods
LC50 Lethal Concentration 50%
LD50 Lethal Dose 50%
MARPOL International Convention for the Prevention of Pollution From Ships
NOAEC No Observed Adverse Effect Concentration
NOAEL No Observed Adverse Effect Level
NOEC Non-Observed Effect Concentration
OEL Occupational Exposure Limit
PBT Persistent, Bioaccumulative, Toxic
PEC Predicted Environmental Concentration
PNEC Predicted No Effect Concentration
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals
RID International Rule for Transport of Dangerous Substances by Railway
SVHC Substances of Very High Concern
vPvB very Persistent and very Bioaccumulative
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Full text of H-Statements
H301: Toxic if swallowed.
H302: Harmful if swallowed.
H310: Fatal in contact with skin.
H314: Causes severe skin burns and eye damage.
H315: Causes skin irritation.
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.

Full text of other abbreviations
Acute Tox.: Acute toxicity
Aquatic Acute: Acute aquatic toxicity
Aquatic Chronic: Chronic aquatic toxicity
Eye Dam.: Serious eye damage
Eye Dam./Irrit.: Serious eye damage/eye irritation
Skin Corr.: Skin corrosion
Skin Irrit.: Skin irritation
Skin Sens.: Skin sensitisation

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

This information corresponds to the present state of our knowledge and is intended as a general description of our products and their possible applications. Coverit s.r.l. makes no warranties, express or implied, as to the information's accuracy, adequacy, sufficiency or freedom from defect and assumes no liability in connection with any use of this information. Any user of this product is responsible for determining the suitability of Coverit s.r.l.'s products for its particular application.

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