

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

- Trade name PERIDIAM® ACTIVE 109

1.2 Relevant identified uses of the substance or mixture and uses advised against**Uses of the Substance/Mixture**

- seed coating

Remarks

- This product may rapidly contribute towards a highly hazardous environment within a confined space (e.g. Within ISO tanks, reactors, silos, etc.).
- Risk assessments should be conducted prior to handling this product / material.

1.3 Details of the supplier of the safety data sheet**Company**

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1.4 Emergency telephone number

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SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****HSNO Regulation**

Skin sensitisation, Category 1
Hazardous to the aquatic environment - chronic hazard, Category 3

H317: May cause an allergic skin reaction.
H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Hazardous Substances and New Organisms Act 1996 and subsequent amendments**Hazardous products which must be listed on the label**

- CAS-No. 2634-33-5 1,2-benzisothiazol-3(2H)-one

PictogramExclamation
mark**Signal word**

- Warning

Hazard statements

- H317 May cause an allergic skin reaction.
- H412 Harmful to aquatic life with long lasting effects.

Precautionary statementsGeneral

- None

Prevention

- P261 Avoid breathing mist or vapours.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P273 Avoid release to the environment.
- P280 Wear protective gloves.

Response

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

Storage

- None

Disposal

- P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards which do not result in classification

None known.

SECTION 3: Composition/information on ingredients**3.1 Substance**

- Not applicable, this product is a mixture.

3.2 Mixture**Information on Components and Impurities**

Chemical name	CAS-No.	GHS Classification	Concentration [%]
Kaolin	1332-58-7	Not classified	>= 5 - < 10
3-hydroxy-N-(o-tolyl)-4-[(2,4,5-trichlorophenyl)azo]naphthalene-2-carboxamide	6535-46-2	Hazardous to the aquatic environment - chronic hazard, Category 2 ; H411	>= 5 - < 10

PERIDIAM® ACTIVE 109

Revision Date 29.09.2025

Manganese carbonate	598-62-9	Not classified	$\geq 1 - < 5$
Poly(oxy-1,2-ethanediyl), .alpha.-[tris(1-phenylethyl)phenyl]-.omega.-hydroxy-	99734-09-5	Hazardous to the aquatic environment - chronic hazard, Category 3 ; H412	$\geq 1 - < 2.5$
Zinc oxide	1314-13-2	Hazardous to the aquatic environment - acute hazard, Category 1 ; H400 Hazardous to the aquatic environment - chronic hazard, Category 1 ; H410 M-Factor(Acute) : 10 M-Factor(Chronic) : 1	$\geq 0.5 - < 1$
1,2-Benzisothiazol-3(2H)-one	2634-33-5	Acute toxicity, Category 4 ; H302 Acute toxicity, Category 2 ; H330 Skin irritation, Category 2 ; H315 Serious eye damage, Category 1 ; H318 Skin sensitisation, Category 1 ; H317 Hazardous to the aquatic environment - acute hazard, Category 1 ; H400 Hazardous to the aquatic environment - chronic hazard, Category 1 ; H410 M-Factor(Acute) : 1 M-Factor(Chronic) : 1 Specific concentration limits: C: ≥ 10 %, Serious eye damage/eye irritation, Category 1; H318 C: $5 - < 10$ %, Serious eye damage/eye irritation, Category 2; H319 C: ≥ 20 %, Skin corrosion/irritation, Category 2; H315 C: ≥ 0.05 %, Skin sensitisation, Category 1; H317	$\geq 0.036 - < 0.1$
Bronopol	52-51-7	Flammable solids, Category 2 ; H228 Acute toxicity, Category 3 ; H301 Acute toxicity, Category 4 ; H312 Skin irritation, Category 2 ; H315 Serious eye damage, Category 1 ; H318 Specific target organ toxicity - single exposure, Category 3 ; H335 (Respiratory system) Specific target organ toxicity - repeated exposure, Category 2 ; H373 Hazardous to the aquatic environment - acute hazard, Category 1 ; H400 Hazardous to the aquatic environment - chronic hazard, Category 2 ; H411 M-Factor(Acute) : 10	$\geq 0.0025 - < 0.025$

3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)isothiazolone	55965-84-9	Acute toxicity, Category 3 ; H301 Acute toxicity, Category 2 ; H330 Acute toxicity, Category 2 ; H310 Skin corrosion, Category 1C ; H314 Serious eye damage, Category 1 ; H318 Skin sensitisation, Sub-category 1A ; H317 Short-term (acute) aquatic hazard, Category 1 ; H400 Long-term (chronic) aquatic hazard, Category 1 ; H410 M-Factor(Acute) : 100 M-Factor(Chronic) : 100 Specific concentration limits: C: ≥ 0.6 %, Skin corrosion, Category 1C; H314 C: $0.06 - < 0.6$ %, Skin irritation, Category 2; H315 C: $0.06 - < 0.6$ %, Eye irritation, Category 2A; H319 C: ≥ 0.0015 %, Skin sensitisation, Sub-category 1A; H317 C: ≥ 0.6 %, Serious eye damage, Category 1; H318	$\geq 0.0015 - < 0.0025$
Non-hazardous ingredients *			Balance

* (Ingredients present at non-hazardous concentrations, according to criteria of the Hazardous Substances (Classification) Regulations 2001 (New Zealand), based on available information).

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

- Plan first aid action before beginning work with this product.
- First aider needs to protect himself.
- Rescuers should wear PPE during rescue and decontamination of victims.
- Show this safety data sheet to the doctor in attendance.
- Medical evaluation and/or advice necessary even only on suspicion of exposure to this product.

In case of inhalation

- Move to fresh air.
- Keep at rest.
- Consult a physician if necessary.

In case of skin contact

- Take off contaminated clothing and shoes immediately.
- Wash off immediately with soap and plenty of water.
- Use a mild soap if available.
- If skin irritation occurs, seek medical advice/attention.

In case of eye contact

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- Consult a physician.
- Get medical attention if symptoms occur.

In case of ingestion

- Do not induce vomiting without medical advice.
- Rinse mouth with water.
- Do not give anything to drink.
- Keep at rest.
- Consult a physician if necessary.

4.2 Most important symptoms and effects, both acute and delayed**Symptoms**

- Symptoms will depend on the target organs.

4.3 Indication of any immediate medical attention and special treatment needed**Notes to physician**

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

- Extinguishing media - small fires
- Water spray
- Carbon dioxide (CO₂)
- Multi-purpose powders
- Alcohol-resistant foam

- Extinguishing media - large fires
- Water spray
- Multi-purpose powders
- Alcohol-resistant foam

Unsuitable extinguishing media

- Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture**Specific hazards during firefighting**

- The pressure in sealed containers can increase under the influence of heat.
- In case of heating:
- Harmful or toxic vapours are released.

- Hazardous decomposition products formed under fire conditions.
- (following evaporation of water)
- High concentrations of toxic or harmful products may remain in the residual liquid once the fire has been extinguished.

Hazardous combustion products:

- Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).
- Nitrogen oxides (NO_x)

5.3 Advice for firefighters**Special protective equipment for firefighters**

- Wear full protective clothing and self-contained breathing apparatus.

- Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing.

Specific fire fighting methods

- Stay upwind.
- Fight fire with normal precautions from a reasonable distance.
- Do not use a solid water stream as it may scatter and spread fire.
- Cool down the containers/equipment exposed to heat with a water spray. Ensure that there is NO direct contact between the water and the product.
- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information

- Evacuate personnel to safe areas.
- Intervention only by capable personnel who are trained and aware of the hazards of the product.
- Never approach containers which have been exposed to fire, without cooling them sufficiently.
- 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**

- Immediately evacuate personnel to safe areas.
- Stay upwind.
- Only qualified personnel equipped with suitable protective equipment may intervene.
- Avoid inhalation, ingestion and contact with skin and eyes.
- Wear chemical resistant personal protective equipment.
- Wear suitable gloves.
- Wear suitable protective clothing.
- In the case of dust or aerosol formation use respirator with an approved filter.
- In the case of vapour formation use a respirator with an approved filter.
- Wear as appropriate:
 - Faceshield or an appropriate full face protection.
- Stop leak if safe to do so.
- If spillage occurs on the public highway, indicate the danger and notify the authorities (police, fire brigade).
- Isolate spill or leak area in a radius of at least 50 meters.
- For further information refer to section 8 "Exposure controls/personal protection".

6.2 Environmental precautions

- Prevent further leakage or spillage if safe to do so.
- Contain the spilled material by bunding.
- The product should not be allowed to enter drains, water courses or the soil.
- Local authorities should be advised if significant spillages cannot be contained.
- If the product contaminates rivers and lakes or drains inform respective authorities.
- If the spill area is porous, the contaminated material must be collected for subsequent treatment or disposal.

6.3 Methods and materials for containment and cleaning up

- Stop leak if safe to do so.
- Dam up with sand or inert earth (do not use combustible materials).
- Soak up with inert absorbent material.

- Shovel or sweep up.
- Keep in suitable, closed containers for disposal.
- Never return spills in original containers for re-use.
- Wash with plenty of water and detergent.
- Clean contaminated surface thoroughly.
- Recover the cleaning water for subsequent disposal.
- Decontaminate tools, equipment and personal protective equipment in a segregated area.
- Dispose of as hazardous waste in compliance with local and national regulations.

Additional advice

- Possible need to alert the neighbourhood.
- Mark the contaminated area with signs and prevent access to unauthorized personnel.
- Only qualified personnel equipped with suitable protective equipment may intervene.
- Material can create slippery conditions.

6.4 Reference to other sections

- 7. HANDLING AND STORAGE
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 13. DISPOSAL CONSIDERATIONS

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

- Handle in accordance with good industrial hygiene and safety practice.
- Risk assessments, along with appropriate identification and implementation of the corresponding risk controls, are to be conducted by competent person(s) on the intended work processes involving this product.
- This product may rapidly contribute towards a highly hazardous environment within a confined space (e.g. Within ISO tanks, reactors, silos, etc.).
- The product must only be handled by specifically trained employees.
- Advice on safe handling
 - If dust production may be expected from further processing, handling or by other means:
 - Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.
 - Provide for appropriate exhaust ventilation and dust collection at machinery.
 - Dust must be extracted directly at the point of origin.
 - Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).
- Any anticipated splash and/or aerosol generation should be contained using suitable engineering controls.
- Wear personal protective equipment.
- Wear suitable protective clothing.
- Avoid inhalation, ingestion and contact with skin and eyes.
- For personal protection, see section 8.

Hygiene measures

- Handle in accordance with good industrial hygiene and safety practice.
- Use clean, well-maintained personal protection equipment.
- Regular cleaning of equipment, work area and clothing.
- When using do not eat, drink or smoke.
- Smoking, eating and drinking should be prohibited in the application area.
- Wash hands before breaks and immediately after handling the product.
- Contaminated work clothing should not be allowed out of the workplace.
- The user is responsible for monitoring the working environment in accordance with local laws and regulations.
- The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.
- Air sampling and / or biological monitoring of the substances shown in Section 8.1 are to be conducted using methods accepted by local competent authorities responsible for workplace safety and health.

7.2 Conditions for safe storage, including any incompatibilities**Technical measures/Storage conditions**

- Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.
- Keep in a bunded area.
- The floor of the storage area should be impermeable and designed to form a water-tight basin.
- Keep locked up or in an area accessible only to qualified or authorised persons.
- Keep containers tightly closed in a dry, cool and well-ventilated place.
- Keep away from open flames, hot surfaces and sources of ignition.
- Keep away from incompatible materials to be indicated by the manufacturer.
- Keep away from: Hazardous reactions may occur on contact with certain chemicals. (Refer to the list of incompatible materials section 10: Stability-Reactivity).

Packaging material**Suitable material**

- Plastic container of HDPE

7.3 Specific end use(s)

- no data available

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Components with national occupational exposure limits**

Components	Value type	Value	Basis
Kaolin	WES-TWA	2 mg/m3	
	Form of exposure : Respirable dust		
Kaolin	WES-TWA	10 mg/m3	
Manganese carbonate	WES-TWA	0.02 mg/m3	

	Form of exposure : Respirable dust Ototoxin Expressed as :Manganese		
Manganese carbonate	WES-TWA	0.2 mg/m3	
	Form of exposure : inhalable dust Ototoxin Expressed as :Manganese		
Zinc oxide	WES-TWA	2 mg/m3	
Zinc oxide	WES-TWA	0.1 mg/m3	
	Form of exposure : Respirable dust		
Zinc oxide	WES-STEL	5 mg/m3	
Zinc oxide	WES-STEL	0.5 mg/m3	
	Form of exposure : Respirable dust		

Components with other occupational exposure limits

Components	Value type	Value	Basis
Kaolin	TWA	2 mg/m3	
	Form of exposure : Respirable particulate matter		
Manganese carbonate	TWA	0.1 mg/m3	
	Form of exposure : Inhalable particulate matter Expressed as :Manganese		
Manganese carbonate	TWA	0.02 mg/m3	
	Form of exposure : Respirable particulate matter Expressed as :Manganese		
Zinc oxide	TWA	2 mg/m3	
	Form of exposure : Respirable particulate matter		
Zinc oxide	STEL	10 mg/m3	
	Form of exposure : Respirable particulate matter		

8.2 Exposure controls

Control measures

Engineering measures

- Risk assessments, along with appropriate identification and implementation of the corresponding risk controls, are to be conducted by competent person(s) on the intended work processes involving this product.
- Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures :
 - Facilities and equipment easily cleanable.
 - Enclosure and/or isolation of emission source.
 - Effective exhaust ventilation system.
 - Extract at emission point.
 - Ensure adequate ventilation.
 - Ensure that extracted air cannot be returned to the workplace through the ventilation system.
- Any anticipated splash and/or aerosol generation should be contained using suitable engineering controls.
- If dust production may be expected from further processing, handling or by other means:
 - Dust must be extracted directly at the point of origin.
- Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Individual protection measures

Respiratory protection

- This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation.
- Reference should be made to Australian/New Zealand Standards AS/NZS 1715, Selection, Use and maintenance of Respiratory Protective Devices.

Hand protection

- Where there is a risk of contact with hands, use appropriate gloves.
- Gloves must be inspected prior to use.
- Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
- Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Suitable material

- Nitrile rubber
- Permeation rate: > 480 min
- Glove thickness: > 0.4 mm

Eye protection

- Faceshield or an appropriate full face protection.
- Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337.1 Personal eye protection - Eye and face protectors for occupational applications.

Skin and body protection

- Lightweight protective clothing.
- Footwear protecting against chemicals.
- Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

- Handle in accordance with good industrial hygiene and safety practice.
- Use clean, well-maintained personal protection equipment.
- Regular cleaning of equipment, work area and clothing.
- When using do not eat, drink or smoke.
- Smoking, eating and drinking should be prohibited in the application area.
- Wash hands before breaks and immediately after handling the product.
- Contaminated work clothing should not be allowed out of the workplace.
- The user is responsible for monitoring the working environment in accordance with local laws and regulations.
- The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical

surveillance and the use of administrative controls.

- Air sampling and / or biological monitoring of the substances shown in Section 8.1 are to be conducted using methods accepted by local competent authorities responsible for workplace safety and health.

Protective measures

- Emergency equipment immediately accessible, with instructions for use.
- Ensure that eyewash stations and safety showers are close to the workstation location.
- Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards and/or risks that may occur during use.
- The protective equipment must be selected in accordance with current AS/NZS standards and in cooperation with the supplier of the protective equipment.

Environmental exposure controls

- Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.
- Local authorities should be advised if significant spillages cannot be contained.
- If the product contaminates rivers and lakes or drains inform respective authorities.
- If the spill area is porous, the contaminated material must be collected for subsequent treatment or disposal.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<u>Physical state</u>	liquid
<u>Form</u>	suspension
<u>Colour</u>	red
<u>Odour</u>	No data available
<u>Odour Threshold</u>	No data available
<u>Melting point/freezing point</u>	No data available
<u>Initial boiling point and boiling range</u>	No data available
<u>Flammability (solid, gas)</u>	No data available
<u>Flammability (liquids)</u>	No data available
<u>Flammability/Explosive limit</u>	No data available
<u>Flash point</u>	does not flash
<u>Auto-ignition temperature</u>	No data available
<u>Decomposition temperature</u>	No data available
<u>pH</u>	6.6 - 8.6 (100 %) (20 °C)
<u>Viscosity</u>	<u>Viscosity, dynamic</u> : < 1,500 mPa.s (20 °C)
<u>Solubility</u>	No data available
<u>Partition coefficient: n-octanol/water</u>	No data available
<u>Vapour pressure</u>	No data available
<u>Density</u>	ca. 1.11 g/cm ³ (20 °C)
<u>Relative density</u>	No data available
<u>Relative vapor density</u>	No data available
<u>Particle characteristics</u>	No data available
<u>Evaporation rate (Butylacetate = 1)</u>	No data available

9.2 Other information

No data available

SECTION 10: Stability and reactivity**10.1 Reactivity**

- Stable at normal ambient temperature and pressure.

10.2 Chemical stability

- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

- No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

- Keep away from direct sunlight.
- Keep away from open flames, hot surfaces and sources of ignition.
- Avoid excessive heat for prolonged periods of time.

10.5 Incompatible materials

- no data available

10.6 Hazardous decomposition products

- Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).
- Nitrogen oxides (NO_x)

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity****Acute oral toxicity**

Not classified as hazardous for acute oral toxicity according to GHS.
According to the available data on the components.
According to the classification criteria for mixtures.
Unpublished reports and/or published data.

Acute inhalation toxicity

Not classified as hazardous for acute inhalation toxicity according to GHS.
According to the available data on the components.
According to the classification criteria for mixtures.
Unpublished reports and/or published data.

Acute dermal toxicity

Not classified as hazardous for acute dermal toxicity according to GHS.
According to the available data on the components.
According to the classification criteria for mixtures.
Unpublished reports and/or published data.

Acute toxicity (other routes of administration)

Not applicable

Skin corrosion/irritation

According to the available data on the components.
According to the classification criteria for mixtures.
Unpublished reports and/or published data.

Serious eye damage/eye irritation

Not classified as irritating to skin.
According to the available data on the components.
According to the classification criteria for mixtures.
Unpublished reports and/or published data.

Not classified as irritating to eyes

Respiratory or skin sensitisation

kaolin	By analogy Local lymph node assay - Mouse The substance or mixture is not considered to be sensitizing by skin contact. Method: OECD Test Guideline 429 Unpublished reports
3-hydroxy-N-(o-tolyl)-4-[(2,4,5-trichlorophenyl)azo]naphthalene-2-carboxamide	Local lymph node assay (LLNA) - Mouse The substance or mixture is not considered to be sensitizing by skin contact. Method: OECD Test Guideline 429 Unpublished reports
manganese carbonate	By analogy Local lymph node assay - Mouse Maximum Stimulation Index < 3 Method: OECD Test Guideline 429 Unpublished reports
zinc oxide	Maximisation Test - Guinea pig Responding animals in GPMT < 30% Method: OECD Test Guideline 406 Unpublished reports
1,2-benzisothiazol-3(2H)-one	Humans The product is a skin sensitiser, sub-category 1A. Published data
bronopol	Maximisation Test - Guinea pig Does not cause skin sensitisation. Method: Maximisation Test Unpublished reports
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Local lymph node assay - Mouse EC 3 value ≤ 2 % The product is a skin sensitiser, sub-category 1A. Unpublished reports

Mutagenicity**Genotoxicity in vitro**

Product is not considered to be genotoxic.
According to the available data on the components.
According to the classification criteria for mixtures.
Unpublished reports and/or published data.

Genotoxicity in vivo

Product is not considered to be genotoxic.
According to the available data on the components.
According to the classification criteria for mixtures.
Unpublished reports and/or published data.

Carcinogenicity

The product is not considered to be carcinogenic.

According to the available data on the components.
According to the classification criteria for mixtures.
Unpublished reports and/or published data.

Toxicity for reproduction and development**Toxicity to reproduction/Fertility**

The product is not considered to affect fertility.
According to the available data on the components.
According to the classification criteria for mixtures.
Unpublished reports and/or published data.

Developmental Toxicity/Teratogenicity

The product is not considered to be toxic for development.
According to the available data on the components.
According to the classification criteria for mixtures.
Unpublished reports and/or published data.

STOT

STOT - single exposure	The substance or mixture is not classified as specific target organ toxicant, single exposure. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
STOT - repeated exposure	The substance or mixture is not classified as specific target organ toxicant, repeated exposure. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
<u>Experience with human exposure</u>	The product itself has not been tested.
<u>Aspiration toxicity</u>	No data available
<u>Aspiration toxicity</u>	Not classified for aspiration toxicity according to GHS criteria. According to the available data on the components, According to the classification criteria for mixtures., Internal evaluation.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic Compartment

Acute toxicity to fish	The product itself has not been tested. Global ecotoxicity assessment available below.
Acute toxicity to daphnia and other aquatic invertebrates	The product itself has not been tested. Global ecotoxicity assessment available below.
Toxicity to aquatic plants	The product itself has not been tested. Global ecotoxicity assessment available below.
Toxicity to microorganisms	The product itself has not been tested.
Chronic toxicity to fish	The product itself has not been tested. Global ecotoxicity assessment available below.
Chronic toxicity to daphnia and other aquatic invertebrates	The product itself has not been tested. Global ecotoxicity assessment available below.

Sediment compartment

Toxicity to benthic organisms	The product itself has not been tested.
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Terrestrial Compartment

Toxicity to soil dwelling organisms	The product itself has not been tested.
Toxicity to terrestrial plants	The product itself has not been tested.
Toxicity to above ground organisms	The product itself has not been tested.

M-Factor

zinc oxide	Acute aquatic toxicity = 10 Chronic aquatic toxicity = 1 (according to the Globally Harmonized System (GHS))
1,2-benzisothiazol-3(2H)-one	Acute aquatic toxicity = 1 Chronic aquatic toxicity = 1 (according to the Globally Harmonized System (GHS))

bronopol Acute aquatic toxicity = 10
(according to the Globally Harmonized System (GHS))

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) Acute aquatic toxicity = 100
Chronic aquatic toxicity = 100
(according to the Globally Harmonized System (GHS))

12.2 Persistence and degradability

Abiotic degradation

Stability in water Conclusion is not possible for a mixture as a whole.

Photodegradation Conclusion is not possible for a mixture as a whole.

Physical- and photo-chemical elimination

Physico-chemical removability Conclusion is not possible for a mixture as a whole.

Biodegradation

Biodegradability As (bio)degradability is not relevant for mixtures, all the components of the mixture were assessed individually (rapid degradability assessment available below).

Degradability assessment

Conclusion is not possible due to incomplete or heterogeneous data on the components.

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water

3-hydroxy-N-(o-tolyl)-4-[(2,4,5-trichlorophenyl)azo]naphthalene-2-carboxamide Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

Poly(oxy-1,2-ethanediyl), .alpha.-[tris(1-phenylethyl)phenyl]-.omega.-hydroxy-

bronopol

Not applicable Surface-Active

Not potentially bioaccumulable

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

Bioconcentration factor (BCF) Conclusion is not possible due to incomplete or heterogeneous data on the components.

12.4 Mobility in soil

Adsorption potential (Koc) Conclusion is not possible for a mixture as a whole.

Known distribution to environmental compartments

bronopol Ultimate destination of the product : Water
Internal evaluation.
Published data
Unpublished reports

12.5 Results of PBT and vPvB assessment

Product does not contain substances which are persistent, bioaccumulative, and toxic (PBT) at levels of 0.1% or higher.
Product does not contain substances which are very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Ecotoxicity assessment

Short-term (acute) aquatic hazard

According to the classification criteria for mixtures.
Unpublished reports
Published data

According to the available data on the components
Toxic to aquatic life.

Long-term (chronic) aquatic hazard

According to the available data on the components
Harmful to aquatic life with long lasting effects.

According to the classification criteria for mixtures.
Unpublished reports
Published data

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product Disposal**

- Dispose of as hazardous waste in compliance with local and national regulations.

Prohibition

- Do not discharge directly into the environment.
- Do not dispose of with domestic refuse.

Advice on cleaning and disposal of packaging

- Empty remaining contents.
- Clean using steam.
- Clean with the help of detergent. Avoid using any solvent.
- Monitor the residual vapours.
- Dispose of rinse water in accordance with local and national regulations.
- Containers that cannot be cleaned must be treated as waste.
- Dispose of contents/ container to an approved waste disposal plant.
- Dispose of in accordance with local regulations.
- Where possible recycling is preferred to disposal or incineration.
- The recycled material must be completely dry and free of pollutants.

Prohibition

- Do NOT dispose of untreated packaging with industrial waste.
- Do not dispose of with domestic refuse.

SECTION 14: Transport information**Land transport – NZS:5433 (New Zealand)**

not regulated

IMDG

not regulated

IATA

not regulated

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transport regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****HSNO Regulation****HSNO Group:** Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2020**Approved handler requirement (New Zealand):** Not applicable**HSNO Approval Code:** HSR002670**Tolerable Exposure Limits (TEL)**

Not applicable

Environmental Exposure Limits (EEL)

Not applicable

Notification status

Inventory Information	Status
United States TSCA Inventory	- All substances listed as active on the TSCA inventory
EU. European Registration, Evaluation, Authorization and Restriction of Chemical (REACH)	- When purchased from a Syensqo legal entity based in the EEA ("European Economic Area"), this product is compliant with the registration provisions of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt, and/or registered. When purchased from a legal entity outside of the EEA, please contact your local representative for additional information.
Canadian Domestic Substances List (DSL)	- Listed on Inventory
Australian Inventory of Industrial Chemicals (AIIC)	- One or more components not listed on inventory
Japan. CSCL - Inventory of Existing and New Chemical Substances	- One or more components not listed on inventory
Korea. Korean Existing Chemicals Inventory (KECI)	- One or more components not listed on inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	- Listed on Inventory
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	- One or more components not listed on inventory
Taiwan Chemical Substance Inventory (TCSI)	- One or more components not listed on inventory
New Zealand. Inventory of Chemical Substances	- All components are listed on the NZIoC inventory. Additional HSNO obligations may apply. Please refer to Section 15 of SDS for New Zealand.

SECTION 16: Other information**Full text of H-Statements**

- H228: Flammable solid.
- H301: Toxic if swallowed.
- H302: Harmful if swallowed.
- H310: Fatal in contact with skin.
- H312: Harmful 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.
- H335: May cause respiratory irritation.
- H373: May cause damage to organs through prolonged or repeated exposure.
- 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.

Key or legend to abbreviations and acronyms used in the safety data sheet

- STEL: Short-term exposure limit
- TWA: 8-hour, time-weighted average
- WES-STEL: Workplace Exposure Standard - Short-Term Exposure Limit
- WES-TWA: Workplace Exposure Standard - Time Weighted average
- ca.: approximately
- ADR: European Agreement on International Carriage of Dangerous Goods by Road.
- ADN: European Agreement on the International Carriage of Dangerous Goods by Inland Waterways.
- RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
- IATA: International Air Transport Association.
- ICAO-TI: Technical Instructions for Safe Transport of Dangerous Goods by Air.
- IMDG: International Maritime Dangerous Goods.
- TWA: Time weighted average
- ATE: Estimated value of acute toxicity
- EC: European Community number
- CAS: Chemical Abstracts Service.
- LD50: Substance that causes 50% (half) death in the test animals group (Median Fatal Dose).
- LC50: Substance concentration causing 50% (half) death in the test animals group.
- EC50: Effective Concentration of the substance causing the maximum of 50%.
- PBT: Persistent, Bioaccumulative and Toxic substance.
- vPvB: Very Persistent and Very Bioaccumulative.
- GHS/CLP/SEA: Classification, labeling, packaging regulation
- DNEL: Derived No Effect Level
- PNEC: Predicted No Effect Concentration
- STOT: Specific Target Organ Toxicity

Not all acronyms listed above are referenced in this SDS.

Further information

- Distribute new edition to clients

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. The information exclusively relates to the designated product in its unaltered state. Safety and health hazards may change if such product is used in combination with other materials or in any other manufacturing process. Users are responsible for compliance with all regulations linked to product related activities, and to use the products in accordance with technical instructions given by Syensqo, if any.