LONG-TERM **FACADE PROTECTION**

SAFETY DATA SHEET

according to Regulation (EC) **Nr. 1907/2006**
amended by Regulation (EU) **Nr. 453/2010**

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RESIST

1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product Identifier:

Trade name: erstoalgae RESIST

Other designations: -

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

Relevant identified uses:
Coating material – according to Technical Data Sheet and product label.

Uses advised against: None.

1.3 Details of the supplier of the Safety Data Sheet:

Manufacturer:	ERST GmbH		
Street:	Aiterhofener Str. 4	Tel:	+49 9426 763 30 33
Postcode/City:	94330 Salching	E-Mail:	info@erst.de

1.4 Emergency Telephone Number:

Outside business hours: Poison Information Centre, Berlin – **Tel: +49 (0) 30 30686 790**

2. Hazards Identification

2.1 Classification of the substance or mixture:

Classification according to Regulation (EC) No. 1272/2008 (CLP):

Hazard class	Hazard category	Hazard statement
Aquatic Chronic	3	H412 – Harmful to aquatic life with long lasting effects.

2.2 Label elements:

Labelling according to Regulation (EC) No. 1272/2008 (CLP):

Hazard statements:

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P273 Avoid release to the environment.
P501 Dispose of contents/container to an approved waste disposal facility.

2.3 Other Hazards:

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or does not fall under Annex XIII of Regulation (EC) **No. 1907/2006** at concentrations of **0.1%** or above.

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or does not fall under Annex XIII of Regulation (EC) **No. 1907/2006** at concentrations of **0.1%** or above.

The mixture does not contain any substance with endocrine-disrupting properties at concentrations of **0.1%** or above.

EUH208 May produce an allergic reaction.

EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

3. Composition/Information on Ingredients

3.1 Substances: Not applicable.

3.2 Mixtures:

Hazardous ingredients:

Chemical name	CAS No.	EC No.	Index No.	Registration No.	Classification	Concent-ration
1,2-Benzisothiazol-3(2H)-one	2634-33-5	220-120-9	613-088-00-6	613-088-00-6	Acute Tox. 4; H302. Skin Irrit. 2; H315. Eye Dam. 1; H318. Skin Sens. 1; H317. Aquatic Acute 1; H400. Aquatic Chronic 2; H411. Acute Tox. 2; H330. M-factor acute: 1. M-factor chronic: 1.	≥ 0.025 – < 0.05% w/w / < 500 ppm
Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one [EC No. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No. 220-239-6] (3:1)	55965-84-9	-	613-167-00-5	01-2120764691-48	Acute Tox. 3; H301. Acute Tox. 2; H330. Acute Tox. 2; H310. Skin Corr. 1B; H314. Skin Sens. 1; H317. Aquatic Acute 1; H400. Aquatic Chronic 1; H410. M-factor acute: 100. M-factor chronic: 10.	≥ 0.0002 – < 0.0015% w /w/ < 15 ppm
2,2-Dibromo-3-nitrilopropionamide (DBNPA)	10222-01-2	233-539-7	-	-	Met. Corr. 1; H290. Acute Tox. 4; H302. Skin Irrit. 2; H315. Skin Sens. 1; H317. Eye Dam. 1; H318. Acute Tox. 4; H332. Aquatic Acute 1; H400.	≥ 0.0025 – < 0.025%
Zinc pyrithione	13463-41-7	236-671-3	-	01-2119511-196-46	Acute Tox. 3; H301. Acute Tox. 2; H330. Repr. 1B; H360D. STOT RE 1; H372. Eye Dam. 1; H318. Aquatic Acute 1; H400 (M=1000). Aquatic Chronic 1; H410 (M=10). ATE oral LD50: 221 mg/kg.	≥ 0.0025 – < 0.025%
Zinc oxide	1314-13-2	215-222-5	-	01-2119463-881-32	Aquatic Acute 1; H400. Aquatic Chronic 1; H410.	≥ 0.025 – < 0.25%
Terbutryn (ISO)	886-50-0	212-950-5	-	-	Aquatic Acute 1; H400 (M=100). Aquatic Chronic 1; H410 (M=100). Acute Tox. 4; H302. Skin Sens. 1; H317.	≥ 0.025 – < 0.1%

Titanium dioxide	13463-67-7	236-675-5	-	01-2119489-379-17	Substance with an occupational exposure limit.	≥ 10 – < 20%

Text of hazard statements and classification abbreviations: see Section 16.

The substances listed in this section are stated with their actual applicable classification.This means that, for substances listed in Annex VI, Table 3.1 of Regulation (EC) No. 1272/2008, all relevant notes stated there have been taken into account for the classification shown here.

The sum of the highest concentrations listed here may result in a classification. Only if this classification is listed in Section 2 does it apply. In all other cases, the total concentration is below the classification threshold.

Composition: pure acrylate dispersion, titanium dioxide, water, calcium carbonates, silicates, silicone resin, pigments, additives and preservatives.

4. First Aid Measures

4.1 Description of first aid measures

General information:
Remove contaminated clothing immediately. If health problems occur, seek medical advice.

After inhalation:
Provide fresh air. Seek medical advice if respiratory tract irritation occurs due to the product.

After skin contact:
Wash with water and soap, then rinse. Do not use solvents or thinners.

After eye contact:
Remove contact lenses. Rinse immediately with plenty of water for at least 15 minutes while keeping the eyelids open. Consult an ophthalmologist if necessary.

After ingestion:
Drink plenty of water in small sips to dilute the product. Avoid vomiting. Seek medical advice immediately and show the packaging.

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

Where applicable, delayed symptoms and effects are described in Section 11 or under the exposure routes in Section 4.1.

In certain cases, symptoms of poisoning may occur only after an extended period or after several hours.

Sensitive persons: allergic reaction possible.

4.3 Indication of any immediate medical attention and special treatment needed:

Treat symptomatically.

5. Firefighting Measures

5.1 Extinguishing media:

Suitable extinguishing media:
The product is non-combustible. Use water spray jet, alcohol-resistant foam, carbon dioxide, powder or water mist.

Unsuitable extinguishing media: Full water jet.

5.2 Special hazards arising from the substance or mixture:

In case of fire, dense black smoke may be produced.

Inhalation of hazardous decomposition products may cause serious damage to health.

Do not allow contaminated extinguishing water to enter drains or surface waters.

5.3 Advice for firefighters:

Stay in the danger area only with self-contained breathing apparatus.

Additional information:

Cool endangered containers from a safe distance using water spray. Suppress escaping vapours with water. Prevent extinguishing water from entering surface water, groundwater or soil.

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6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Observe protective regulations; see Sections 7 and 8.

6.2 Environmental precautions:

Prevent the product and large quantities of contaminated wash water from entering surface water or soil.

Do not allow the product to enter drains.

6.3 Methods and material for containment and cleaning up:

Contain spilled material with non-combustible absorbent material, such as sand, earth, diatomaceous earth or vermiculite, and collect it in designated containers for disposal according to local regulations; see Section 13.
Rinse residues with plenty of water.

6.4 Reference to other sections:

See also Sections 8 and 13.

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7. Handling and Storage

7.1 Precautions for safe handling:

No special measures are required if stored and handled as prescribed. For protective equipment, see Section 8.

7.2 Conditions for safe storage, including any incompatibilities:

Information on storage conditions: Keep containers tightly closed and dry in a cool, well-ventilated place. Store in containers corresponding to the original packaging. Keep out of reach of children. Protect from frost. Do not store together with food or animal feed.

Storage class: VCI 12

7.3 Specific end use(s):

Observe the manufacturer's technical information.

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8. Exposure Controls/Personal Protection

8.1 Control parameters:

Occupational exposure limit values and/or biological limit values

8.1.1 Occupational exposure limit values (AGW), Germany:

55965-84-9 / Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one [EC No. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No. 220-239-6] (3:1):

MAK Germany: 0.2 E mg/m³, see Section Xc.

13463-41-7 Zinc pyrithione: MAK Germany: see Section IIb.

13463-67-7 Titanium dioxide:
AGW long-term value: 1.25* / 10** mg/m³, 2(II); *alveolar fraction, **inhalable fraction; AGS, DFG.

Additional information:
The lists valid at the time of preparation were used as the basis.
General dust limit values according to TRGS 900:

Basis	Value	Limit value	Peak limitation / remarks
TRGS 900	AGW:	10 mg/m³	2; type of exposure: inhalable dust
	AGW:	3 mg/m³	2; type of exposure: respirable dust

8.2 Exposure controls:

Personal protective equipment

Respiratory protection:
Ensure good ventilation. This can be achieved by local exhaust ventilation or general ventilation. If this is not sufficient to keep concentrations below occupational exposure limits, suitable respiratory protection must be worn. During spraying, do not inhale spray mist. Use particle filter P2, white.

Hand protection:
Solvent-resistant and alkali-resistant protective gloves are recommended. Apply water-insoluble, lipid-replenishing skin protection products to clean skin before starting work and after each break and rub in thoroughly.

Eye protection:
Wear tightly fitting safety goggles if there is a risk of splashing.

Body protection:
Protective work clothing is recommended.

Respiratory protection:
Normally not required.

8.3 Environmental exposure controls:

Prevent the product and large quantities of contaminated wash water from entering surface water or soil.
Do not allow the product to enter drains.
If surface water or drains are contaminated, inform the competent authorities.
Prevent further leakage if safe to do so.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties:

Appearance

Property	Value
Physical state	Liquid

Colour	White
Odour	Characteristic
Odour threshold	Not applicable
pH value	Approx. 8–8.5
Melting point/freezing point	Not applicable
Initial boiling point and boiling range	100 °C
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	Not applicable
Vapour pressure	Approx. 23 hPa
Vapour density	Not applicable
Relative density	Not applicable
Density at 20 °C	Approx. 1.48 g/cm^3
Solubility in water	Soluble
Partition coefficient	Not determined
n-octanol/water	Not determined
Auto-ignition temperature	Not self-igniting
Decomposition temperature	Not determined
Viscosity	Viscous
Explosive properties	Not applicable
Oxidising properties	Not applicable

9.2 Other information:

VOC content: Max. 30 g/l.

10. Stability and Reactivity

10.1 Reactivity: No decomposition is expected if stored and used as intended.

10.2 Chemical stability: No decomposition is expected if stored and used as intended.

10.3 Possibility of hazardous reactions: No hazardous reactions are expected if stored and used as intended.

10.4 Conditions to avoid: Protect from frost. Avoid extremely high temperatures and direct sunlight.

10.5 Incompatible materials: Incompatible with acids, alkalis and oxidising agents.

10.6 Hazardous decomposition products:

No hazardous decomposition products under proper storage and handling conditions.
In case of fire, carbon monoxide, carbon dioxide and smoke in the form of unburnt hydrocarbons may be formed.

11. Toxicological Information

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

Based on the available data, the classification criteria are not met.

Product:

Not determined. If handled properly and in accordance with occupational hygiene measures, harmful effects on health are not expected.

Ingredients – LD/LC50 values relevant for classification:

13463-41-7 Zinc pyrithione:	Oral LD50: 221 mg/kg (ATE), 774 mg/kg (rat)
	Dermal LD50: > 2,000 mg/kg (rat)
	Inhalation LC50: 1.03 mg/l (rat)
886-50-0 Terbutryn (ISO):	Oral LD50: approx. 500 mg/kg (rat)
	Dermal LD50: > 2,000 mg/kg (rat)
	Inhalation LC50: > 5.21 mg/l (rat)

2634-33-5 / 1,2-Benzisothiazol-3(2H)-one

Classification-relevant LD/LC50 values:	Rat, oral: > 500 mg/kg
	Rat, dermal: > 2,000 mg/kg
	Rat, inhalation: > 0.4 mg/l, 4 h

10222-01-2 / 2,2-Dibromo-3-nitrilopropionamide (DBNPA)

Classification-relevant LD/LC50 values:	ATEmix, oral: 1,895 mg/kg, calculated
	ATEmix, dermal: > 5,000 mg/kg

55965-84-9 / Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one [EC No. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No. 220-239-6] (3:1):

Classification-relevant LD/LC50 values:	Rat, oral: 66 mg/kg, OECD 401
	Rat, dermal: 141 mg/kg, OECD 402
	Rat, inhalation: 0.17 mg/l, 4 h, OECD 403
1314-13-2 Zinc oxide:	Oral LD50: > 5,000 mg/kg (rat)

13463-67-7 / Titanium dioxide

Classification-relevant LD/LC50 values:	ATE mix, oral: > 2,000 mg/kg
	ATE mix, dermal: > 2,000 mg/kg
	ATE mix, inhalation: > 5 mg/l

Skin corrosion/irritation:

Based on the available data, the classification criteria are not met.

886-50-0 Terbutryn (ISO): Skin irritation OECD 404 (rabbit)

Serious eye damage/eye irritation:

Based on the available data, the classification criteria are not met.

886-50-0 Terbutryn (ISO): Eye irritation OECD 405 (rabbit)n)

Primary irritation:

CAS 13463-67-7 / Titanium dioxide

Skin corrosion/irritation	OECD 404:	no irritation.
Serious eye damage/eye irritation	OECD 405:	no irritation.

Eye irritation due to mechanical action of dust possible.

Respiratory or skin sensitisation	OECD 406, OECD 429:	no sensitising effect.

Toxicokinetics, metabolism and distribution:
No accumulation of titanium dioxide in tissues was observed after oral administration. Dermal absorption may be considered negligible, as titanium dioxide does not penetrate human skin.

Assessment: harmful if swallowed.

Respiratory or skin sensitisation: May cause an allergic skin reaction.

Germ cell mutagenicity: Based on the available data, the classification criteria are not met.

Carcinogenicity: Based on the available data, the classification criteria are not met.

Reproductive toxicity: Based on the available data, the classification criteria are not met.

Specific target organ toxicity – single exposure:
Based on the available data, the classification criteria are not met.

Subacute to chronic toxicity: CAS 13463-67-7 / Titanium dioxide

Oral NOAEL: 3,500 mg/kg/day, rat, 90 days

Dermal NOAEL: no relevant data available

Inhalation NOAEC: 10 mg/m^3, rat, 90 days

Specific target organ toxicity - repeated exposure:
Based on the available data, the classification criteria are not met.

Aspiration hazard: Based on the available data, the classification criteria are not met.

11.2 Information on other hazards:

Endocrine-disrupting properties: None of the ingredients is present.

12. Ecological Information

12.1 Toxicity:

Aquatic toxicity:

13463-41-7 Zinc pyrithione:

EC50 / 48 h:	0.05 mg/l (Daphnia)
IC50 / 72 h:	0.067 mg/l (Selenastrum capricornutum)
LC50 / 96 h:	0.06 mg/l (rainbow trout)

1314-13-2 Zinc oxide:

EC50 / 48 h:	0.17 mg/l (Daphnia)
IC50 / 72 h:	0.14 mg/l (algae)
LC50 / 96 h:	0.14 mg/l (rainbow trout)

886-50-0 Terbutryn (ISO)

EC50 / 48 h:	7.1 mg/l (Daphnia)
IC50 / 72 h:	0.0055 mg/l (Selenastrum capricornutum)
LC50 / 96 h:	1.8 mg/l (harlequin rasbora)
EC50 / 72 h:	0.104 mg/l (Pseudokirchneriella subcapitata), OECD 201

12.2 Persistence and degradability:

No data available.

12.3 Bioaccumulative potential:

13463-41-7 Zinc pyrithione

OECD 107, shake flask method	1.21, n-octanol/water.

886-50-0 Terbutryn (ISO)

OECD 117, log Kow, HPLC method	3.19, n-octanol/water.
OECD 305, BCF	103, calculated, EPIWIN.

12.4 Mobility in soil:

No data available.

12.5 Results of PBT and vPvB assessment:

This product does not contain components at concentrations of 0.1% or above that have been assessed as persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

12.6 Endocrine-disrupting properties:

The product does not contain any substances with endocrine-disrupting properties.

12.7 Other adverse effects:

Remarks: toxic to fish.

Behaviour in sewage treatment plants:

886-50-0 Terbutryn (ISO):

EC20 / 3 h:	> 100 mg/l, activated sludge organisms,	OECD 209.

Further ecological information:

Water hazard class 3, self-classification: highly hazardous to water.

Do not allow the product to enter groundwater, surface water or drains, even in small quantities.

Danger to drinking water may occur even if very small quantities leak into the ground.

Toxic to fish in surface waters.

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13. Disposal Considerations

13.1 Waste treatment methods:

Dispose of properly in accordance with local official regulations.
Liquid residues of the preparation must be taken to a collection point for waste varnishes/paints.
Dried residues may be disposed of with household waste or as construction site waste.

Treatment of contaminated packaging:

Contaminated packaging must be emptied completely.
After cleaning with water, packaging may be sent for recycling.
Uncleaned packaging must be disposed of in the same way as the substance.

Waste code according to the German Waste Catalogue Ordinance (AVV):

08 01 12 – waste paint and varnish.

Special precautions: None.

Relevant EU or other provisions: None.

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14. Transport Information

14.1 UN number:
Not dangerous goods.

14.2 UN proper shipping name:
ADR/RID: Not dangerous goods.

IMDG Code / ICAO-TI / IATA-DGR: Not dangerous goods.

14.3 Transport hazard class(es):
Not dangerous goods.

14.4 Packing group:
Not dangerous goods.

14.5 Environmental hazards:
Not dangerous goods.

Environmentally hazardous substance mark:

ADR/RID / IMDG Code / ICAO-TI / IATA-DGR: Not dangerous goods.

Marine pollutant: Not dangerous goods.

14.5 Special precautions for user:
Not dangerous goods within the meaning of transport regulations.

14.5 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code.
Pollution category (X, Y or Z): no information available.

Ship type (1, 2 or 3): no information available.

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15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Product hazard letter(s) and hazard designation(s):
No hazard symbols.

H-statements:
None.

National Regulations

Water hazard class:
Class 1 according to VwVwS.

VbF class:
Not subject to the regulation.

EU regulations:
Information according to EU Directive 2004/42/EC on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes.

Product subcategory and VOC limit values according to Annex II, letter A of the Directive:
Category c, type Wb.
VOC limit value for the category for 2010: 40 g/l.

This product contains max. 2 g/l VOC.

Information for allergy sufferers according to EUH208:

This product contains preservatives based on 1,2-benzisothiazol-3(2H)-one (BIT), 5-chloro-2-methyl-2H-isothiazol-3-one / 2-methyl-2H-isothiazol-3-one (CIT/MIT), zinc pyrithione, Terbutryn (ISO) and zinc oxide as film preservatives. These may produce allergic reactions.

15.2 Chemical safety assessment:

A chemical safety assessment is not required for this mixture.

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16. Other Information

Product code according to GISBAU (Hazardous Substances Information System of the German Social Accident Insurance Institution for the Construction Industry) for paints and varnishes:

GISCODE: M-DF01F Dispersion paint, solvent-free, active substance.

Other Information:

This mixture does not contain any substance of very high concern (SVHC) at concentrations of 0.1% or above. Therefore, according to REACH Regulation (EC) No. 1907/2006, no exposure scenario is required. End uses do not need to be defined and safety assessments do not need to be prepared.

Assessment according to Regulation (EC) No. 1272/2008:

EUH208: Contains 1,2-benzisothiazol-3(2H)-one (BIT), 5-chloro-2-methyl-2H-isothiazol-3-one / 2-methyl-2H-isothiazol-3-one (CIT/MIT), zinc pyrithione, Terbutryn (ISO) and zinc oxide as film preservatives.

These may produce allergic reactions.

Text of hazard statements mentioned in Sections 2 and 3:

H290	May be corrosive to metals.
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.
H332	Harmful if inhaled.
H360D	May damage the unborn child.
H372	Causes 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.

Supplemental hazard statements:

EUH208	May produce an allergic reaction.
EUH211	Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

Further information:

The information is based on the current state of our knowledge. It does not, however, constitute a guarantee of product properties and does not establish a contractual legal relationship.

CONTACT

ERST GmbH
Aiterhofener Str. 4
94330 Salching, Germany
+49 9426 76 33 033
info@erst.de
www.erst.de