



Aro-Bond 537 (Aro-Bond DX5949)

Ureka Global Ltd

Version No: 2.5

Safety data sheet according to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

Chemwatch Hazard Alert Code: 2

Issue Date: 14/10/2022

Print Date: 17/10/2022

S.REACH.GB.EN

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

1.1. Product Identifier

| | |
|-------------------------------|--------------------------------|
| Product name | Aro-Bond 537 (Aro-Bond DX5949) |
| Chemical Name | Not Applicable |
| Synonyms | Not Available |
| Chemical formula | Not Applicable |
| Other means of identification | UFI:URFH-V0SS-M00C-K5GW |

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

| | |
|--------------------------|----------------|
| Relevant identified uses | Adhesive. |
| Uses advised against | Not Applicable |

1.3. Details of the manufacturer or supplier of the safety data sheet

| | |
|-------------------------|--|
| Registered company name | Ureka Global Ltd |
| Address | 7 Flowers Hill Bristol BS4 5JJ United Kingdom |
| Telephone | +44 (0)117 971 1364 |
| Fax | Not Available |
| Website | www.thenamehatsticks.com |
| Email | sales@thenamethatsticks.com |

1.4. Emergency telephone number

| | |
|-----------------------------------|---|
| Association / Organisation | Ureka Global Ltd |
| Emergency telephone numbers | +44 (0)117 971 1364 (Mon - Fri 09:00 - 16:00) |
| Other emergency telephone numbers | Not Available |

SECTION 2 Hazards identification

2.1. Classification of the substance or mixture

| | |
|---|----------------|
| Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567 [1] | Not Applicable |
|---|----------------|

2.2. Label elements

| | |
|---------------------|----------------|
| Hazard pictogram(s) | Not Applicable |
| Signal word | Not Applicable |

Hazard statement(s)

Not Applicable

Supplementary statement(s)

| | |
|--------|--|
| EUH208 | Contains . May produce an allergic reaction. |
| EUH210 | Safety data sheet available on request. |

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Precautionary statement(s) Prevention

Not Applicable

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

2.3. Other hazards

REACH - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

SECTION 3 Composition / information on ingredients**3.1.Substances**

See 'Composition on ingredients' in Section 3.2

3.2.Mixtures

| 1.CAS No 2.EC No 3.Index No 4.REACH No | %[weight] | Name | Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567 | SCL / M-Factor | Nanoform Particle Characteristics |
|---|-----------|--------------------------------------|---|--|---|
| 1.2634-33-5 2.220-120-9 3.613-088-00-6 4.Not Available | <1 | <u>1,2-benzisothiazoline-3-one</u> | Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 1, Sensitisation (Skin) Category 1, Hazardous to the Aquatic Environment Acute Hazard Category 1; H302, H315, H318, H317, H400 [2] | Skin Sens. 1; H317: C ≥ 0,05 % | Not Available |
| 1.2682-20-4 2.220-239-6 3.613-326-00-9 4.Not Available | <1 | <u>2-methyl-4-isothiazolin-3-one</u> | Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 3, Acute Toxicity (Inhalation) Category 2, Skin Corrosion/Irritation Category 1B, Serious Eye Damage/Eye Irritation Category 1, Sensitisation (Skin) Category 1A, Hazardous to the Aquatic Environment Acute Hazard Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 1; H301, H311, H330, H314, H318, H317, H400, H410 [2] | Skin Sens. 1A; H317: C ≥ 0,0015 % M=10 M=1 | Not Available |

Legend:

1. Classified by Chemwatch; 2. Classification drawn from GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567; 3. Classification drawn from C&L; * EU IOELVs available; [e] Substance identified as having endocrine disrupting properties

SECTION 4 First aid measures**4.1. Description of first aid measures**

| | |
|---------------------|--|
| Eye Contact | If this product comes in contact with eyes: ▶ Wash out immediately with water. ▶ If irritation continues, seek medical attention. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| Skin Contact | If skin contact occurs: ▶ Immediately remove all contaminated clothing, including footwear. ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation. |
| Inhalation | ▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▶ Other measures are usually unnecessary. |
| Ingestion | ▶ Immediately give a glass of water. ▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor. |

4.2 Most important symptoms and effects, both acute and delayed

See Section 11

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

Treat symptomatically.

SECTION 5 Firefighting measures**5.1. Extinguishing media**

- ▶ There is no restriction on the type of extinguisher which may be used.
- ▶ Use extinguishing media suitable for surrounding area.

5.2. Special hazards arising from the substrate or mixture

| | |
|-----------------------------|-------------|
| Fire Incompatibility | None known. |
|-----------------------------|-------------|

5.3. Advice for firefighters

| | |
|----------------------|--|
| Fire Fighting | ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear breathing apparatus plus protective gloves in the event of a fire. |
|----------------------|--|

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| | |
|-----------------------|--|
| | <div>▸ Prevent, by any means available, spillage from entering drains or water courses.</div> |
| Fire/Explosion Hazard | <div>▸ Non combustible. ▸ Not considered a significant fire risk, however containers may burn. May emit corrosive fumes.</div> |

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

See section 8

6.2. Environmental precautions

See section 12

6.3. Methods and material for containment and cleaning up

| | |
|--------------|--|
| Minor Spills | <div>▸ Clean up all spills immediately. ▸ Avoid breathing vapours and contact with skin and eyes. ▸ Control personal contact with the substance, by using protective equipment.</div> |
| Major Spills | <div>▸ Absorb or contain isothiazolinone liquid spills with sand, earth, inert material or vermiculite. ▸ The absorbent (and surface soil to a depth sufficient to remove all of the biocide) should be shovelled into a drum and treated with an 11% solution of sodium metabisulfite (Na2S2O5) or sodium bisulfite (NaHSO3), or 12% sodium sulfite (Na2SO3) and 8% hydrochloric acid (HCl). ▸ Glutathione has also been used to inactivate the isothiazolinones.</div> |

6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

| | |
|-------------------------------|--|
| Safe handling | <div>▸ Avoid all personal contact, including inhalation. ▸ Wear protective clothing when risk of exposure occurs. ▸ Use in a well-ventilated area. ▸ DO NOT allow clothing wet with material to stay in contact with skin</div> |
| Fire and explosion protection | See section 5 |
| Other information | |

7.2. Conditions for safe storage, including any incompatibilities

| | |
|-------------------------|--|
| Suitable container | <div>▸ Polyethylene or polypropylene container. ▸ Packing as recommended by manufacturer. ▸ Check all containers are clearly labelled and free from leaks.</div> |
| Storage incompatibility | None known |

7.3. Specific end use(s)

See section 1.2

SECTION 8 Exposure controls / personal protection

8.1. Control parameters

| Ingredient | DNELs Exposure Pattern Worker | PNECs Compartment |
|-------------------------------|--|--|
| 1,2-benzisothiazoline-3-one | <div>Dermal 0.966 mg/kg bw/day (Systemic, Chronic) Inhalation 6.81 mg/m³ (Systemic, Chronic) Dermal 0.345 mg/kg bw/day (Systemic, Chronic) * Inhalation 1.2 mg/m³ (Systemic, Chronic) *</div> | <div>4.03 µg/L (Water (Fresh)) 0.403 µg/L (Water - Intermittent release) 1.1 µg/L (Water (Marine)) 49.9 µg/kg sediment dw (Sediment (Fresh Water)) 4.99 µg/kg sediment dw (Sediment (Marine)) 3 mg/kg soil dw (Soil) 1.03 mg/L (STP)</div> |
| 2-methyl-4-isothiazolin-3-one | <div>Inhalation 0.021 mg/m³ (Local, Chronic) Inhalation 0.043 mg/m³ (Local, Acute) Oral 0.027 mg/kg bw/day (Systemic, Chronic) * Inhalation 0.021 mg/m³ (Local, Chronic) * Oral 0.053 mg/kg bw/day (Systemic, Acute) * Inhalation 0.043 mg/m³ (Local, Acute) *</div> | <div>3.39 µg/L (Water (Fresh)) 3.39 µg/L (Water - Intermittent release) 3.39 µg/L (Water (Marine)) 0.047 mg/kg soil dw (Soil) 0.23 mg/L (STP)</div> |

* Values for General Population

Occupational Exposure Limits (OEL)

INGREDIENT DATA

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Not Available | Not Available | Not Available | Not Available | Not Available | Not Available | Not Available |

Not Applicable

Emergency Limits

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| Ingredient | TEEL-1 | TEEL-2 | TEEL-3 |
|--------------------------------|---------------|---------------|---------------|
| Aro-Bond 537 (Aro-Bond DX5949) | Not Available | Not Available | Not Available |



| Ingredient | Original IDLH | Revised IDLH |
|-------------------------------|---------------|---------------|
| 1,2-benzisothiazoline-3-one | Not Available | Not Available |
| 2-methyl-4-isothiazolin-3-one | Not Available | Not Available |

Occupational Exposure Banding

| Ingredient | Occupational Exposure Band Rating | Occupational Exposure Band Limit |
|-------------------------------|-----------------------------------|-----------------------------------|
| 1,2-benzisothiazoline-3-one | E | ≤ 0.01 mg/m ³ |
| 2-methyl-4-isothiazolin-3-one | D | > 0.01 to ≤ 0.1 mg/m ³ |

Notes: Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.

8.2. Exposure controls

| | |
|--|--|
| 8.2.1. Appropriate engineering controls | Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. |
| 8.2.2. Personal protection |   |
| Eye and face protection | <ul style="list-style-type: none"> ▸ Safety glasses with side shields. ▸ Chemical goggles. ▸ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. |
| Skin protection | See Hand protection below |
| Hands/feet protection | <ul style="list-style-type: none"> ▸ Wear chemical protective gloves, e.g. PVC. ▸ Wear safety footwear or safety gumboots, e.g. Rubber <p>NOTE:</p> <ul style="list-style-type: none"> ▸ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. ▸ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <ul style="list-style-type: none"> ▸ Butyl rubber gloves ▸ Nitrile rubber gloves (Note: Nitric acid penetrates nitrile gloves in a few minutes.) |
| Body protection | See Other protection below |
| Other protection | ▸ Barrier cream. |

8.2.3. Environmental exposure controls

See section 12

SECTION 9 Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | | | |
|---|---------------|--|---------------|
| Appearance | Liquid. | | |
| Physical state | Liquid | Relative density (Water = 1) | 1.0-1.2 |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Available |
| pH (as supplied) | Not Available | Decomposition temperature (°C) | Not Available |
| Melting point / freezing point (°C) | Not Available | Viscosity (cSt) | Viscous |
| Initial boiling point and boiling range (°C) | 100 | Molecular weight (g/mol) | Not Available |
| Flash point (°C) | Not Available | Taste | Not Available |
| Evaporation rate | Negligible | Explosive properties | Not Available |
| Flammability | Not Available | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | Not Available | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | Not Available | Volatile Component (%vol) | Not Available |
| Vapour pressure (kPa) | Not Available | Gas group | Not Available |

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| | | | |
|---------------------------------|---------------|--|---------------|
| Solubility in water | Miscible | pH as a solution (Not Available%) | ~3-5 |
| Vapour density (Air = 1) | Not Available | VOC g/L | Not Available |
| Nanoform Solubility | Not Available | Nanoform Particle Characteristics | Not Available |
| Particle Size | Not Available | | |

9.2. Other information

Not Available

SECTION 10 Stability and reactivity

| | |
|---|--|
| 10.1. Reactivity | See section 7.2 |
| 10.2. Chemical stability | <ul style="list-style-type: none"> Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur. |
| 10.3. Possibility of hazardous reactions | See section 7.2 |
| 10.4. Conditions to avoid | See section 7.2 |
| 10.5. Incompatible materials | See section 7.2 |
| 10.6. Hazardous decomposition products | See section 5.3 |

SECTION 11 Toxicological information

11.1. Information on toxicological effects

| | |
|---------------------|--|
| Inhaled | The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. |
| Ingestion | The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. Taken by mouth, isothiazolinones have moderate to high toxicity. The major signs of toxicity are severe stomach irritation, lethargy, and inco-ordination. |
| Skin Contact | Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons. A 0.5% solution of 1,2-benzisothiazoline-3-one (BIT) is irritating to the skin. Even 0.05% can cause allergy, according to patch tests, with reddening of the skin. Provocation tests with BIT showed the material to be sensitizing. Solutions of isothiazolinones may be irritating or even damaging to the skin, depending on concentration. A concentration of over 0.1% can irritate, and over 0.5% can cause severe irritation. |
| Eye | Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn). Solutions containing isothiazolinones may damage the mucous membranes and cornea. Animal testing showed very low concentrations (under 0.1%) did not cause irritation, while higher levels (3-5.5%) produced severe irritation and damage to the eye. |
| Chronic | Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. In animal testing, 1,2-benzisothiazoline-3-one (BIT) did not cause toxicity to the embryo or birth defects. The material does not cause mutations or an increase in cancer. Mild anaemia, reduction in food intake and changes in organ weights did occur in a long-term study. The isothiazolinones are known contact sensitisers. Sensitisation is more likely with the chlorinated species as opposed to the non-chlorinated species. |

| Aro-Bond 537 (Aro-Bond DX5949) | TOXICITY | IRRITATION |
|--------------------------------|---|---|
| | Not Available | Not Available |
| 1,2-benzisothiazoline-3-one | TOXICITY | IRRITATION |
| | dermal (rat) LD50: >2000 mg/kg ^[1] Oral (Rat) LD50; 454 mg/kg ^[1] | Eye: adverse effect observed (irreversible damage) ^[1] Skin: no adverse effect observed (not irritating) ^[1] |
| 2-methyl-4-isothiazolin-3-one | TOXICITY | IRRITATION |
| | dermal (rat) LD50: 242 mg/kg ^[1] | Eye: adverse effect observed (irreversible damage) ^[1] |
| | Inhalation(Rat) LC50; 0.1 mg/l4h ^[1] Oral (Rat) LD50; 120 mg/kg ^[1] | Skin: adverse effect observed (corrosive) ^[1] |
| Legend: | 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances | |

| | |
|------------------------------------|--|
| 1,2-BENZISOTHIAZOLINE-3-ONE | The predominant fate of the thiazole ring is oxidative ring scission catalysed by cytochrome P450 (CYP) and formation of the corresponding alpha-dicarbonyl metabolites and thioamide derivatives. The well-established toxicity associated with thioamides and thioureas has led to the speculation that thiazole toxicity is attributed to ring scission yielding the corresponding thioamide metabolite. Ring opening has also been observed in benzothiazoles. Acute toxicity data show that 1,2-benzisothiazoline-3-one (BIT) is moderately toxic by the oral and dermal routes but that this chemical is a |
|------------------------------------|--|

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| | |
|---|--|
| | <p>severe eye irritant. Irritation to the skin from acute data show only mild skin irritation, but repeated dermal application indicated a more significant skin irritation response.</p> <p>The neurotoxicity observed in the rat acute oral toxicity study (piloerection and upward curvature of the spine at 300 mg/kg and above; decreased activity, prostration, decreased abdominal muscle tone, reduced righting reflex, and decreased rate and depth of breathing at 900 mg/kg) and the acute dermal toxicity study (upward curvature of the spine was observed in increased incidence, but this was absent after day 5 post-dose at a dose of 2000 mg/kg) were felt to be at exposures in excess of those expected from the use pattern of this pesticide and that such effects would not be observed at estimated exposure doses.</p> |
| 2-METHYL-4-ISOTHIAZOLIN-3-ONE | <p>Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant.</p> <p>Based on laboratory and animal testing, exposure to the material may result in irreversible effects and mutations in humans.</p> <p>The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p>The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.</p> <p>Formaldehyde generators (releasers) are often used as preservatives. The maximum authorised concentration of free formaldehyde is 0.2% and must be labelled with the warning sign "contains formaldehyde" where the concentration exceeds 0.05%. The use of formaldehyde-releasing preservatives ensures that the level of free formaldehyde in the products is always low but sufficient to inhibit microbial growth - it disrupts metabolism to cause death of the organism. However there is a concern that formaldehyde generators can produce amines capable of causing cancers (nitrosamines) when used in formulations containing amines.</p> <p>NOTE: Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA.</p> <p>Considered to be a minor sensitiser in Kathon CG (1) (1). Bruze et al - Contact Dermatitis 20: 219-39, 1989</p> |
| Aro-Bond 537 (Aro-Bond DX5949) & 1,2-BENZISOTHIAZOLINE-3-ONE & 2-METHYL-4-ISOTHIAZOLIN-3-ONE | <p>The following information refers to contact allergens as a group and may not be specific to this product.</p> <p>Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.</p> |
| 1,2-BENZISOTHIAZOLINE-3-ONE & 2-METHYL-4-ISOTHIAZOLIN-3-ONE | <p>In light of potential adverse effects, and to ensure a harmonised risk assessment and management, the EU regulatory framework for biocides has been established with the objective of ensuring a high level of protection of human and animal health and the environment. To this aim, it is required that risk assessment of biocidal products is carried out before they can be placed on the market. A central element in the risk assessment of the biocidal products are the utilization instructions that defines the dosage, application method and amount of applications and thus the exposure of humans and the environment to the biocidal substance.</p> <p>Humans may be exposed to biocidal products in different ways in both occupational and domestic settings. No significant acute toxicological data identified in literature search.</p> |

| | | | |
|--|----------|---------------------------------|----------|
| Acute Toxicity | × | Carcinogenicity | × |
| Skin Irritation/Corrosion | × | Reproductivity | × |
| Serious Eye Damage/Irritation | × | STOT - Single Exposure | × |
| Respiratory or Skin sensitisation | × | STOT - Repeated Exposure | × |
| Mutagenicity | × | Aspiration Hazard | × |

Legend: **×** – Data either not available or does not fill the criteria for classification
✓ – Data available to make classification

11.2 Information on other hazards

11.2.1. Endocrine Disruption Properties

Not Available

SECTION 12 Ecological information

12.1. Toxicity

| Aro-Bond 537 (Aro-Bond DX5949) | Endpoint | Test Duration (hr) | Species | Value | Source |
|---------------------------------------|---|---------------------------|-------------------------------|-----------------|---------------|
| | Not Available | Not Available | Not Available | Not Available | Not Available |
| 1,2-benzisothiazoline-3-one | Endpoint | Test Duration (hr) | Species | Value | Source |
| | EC50 | 48h | Crustacea | 0.097mg/L | 4 |
| | EC50(ECx) | 48h | Crustacea | 0.097mg/L | 4 |
| | LC50 | 96h | Fish | 0.067-0.29mg/L | 4 |
| 2-methyl-4-isothiazolin-3-one | Endpoint | Test Duration (hr) | Species | Value | Source |
| | EC50 | 48h | Crustacea | 0.189-0.257mg/L | 4 |
| | NOEC(ECx) | 96h | Algae or other aquatic plants | 0.01mg/l | 2 |
| | LC50 | 96h | Fish | 0.081-0.122mg/L | 4 |
| | EC50 | 96h | Algae or other aquatic plants | 0.063mg/l | 2 |
| Legend: | <p>Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data</p> | | | | |

Environmental Fate: Isothiazolinones are antimicrobials used to control bacteria, fungi, and for wood preservation and antifouling agents. They are frequently used in personal care products such as shampoos and other hair care products, as well as certain paint formulations. The most common isothiazolinone combinations are 5-chloro-2-methyl-4-isothiazolin-3-one, (CMI), and 2-methyl-4-isothiazolin-3-one, (MI).

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12.2. Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|-------------------------------|-------------------------|------------------|
| 2-methyl-4-isothiazolin-3-one | HIGH | HIGH |

12.3. Bioaccumulative potential

| Ingredient | Bioaccumulation |
|-------------------------------|------------------------|
| 2-methyl-4-isothiazolin-3-one | LOW (LogKOW = -0.8767) |

12.4. Mobility in soil

| Ingredient | Mobility |
|-------------------------------|-------------------|
| 2-methyl-4-isothiazolin-3-one | LOW (KOC = 27.88) |

12.5. Results of PBT and vPvB assessment

| | P | B | T |
|-------------------------|---------------|---------------|---------------|
| Relevant available data | Not Available | Not Available | Not Available |
| PBT | ✗ | ✗ | ✗ |
| vPvB | ✗ | ✗ | ✗ |
| PBT Criteria fulfilled? | No | | |
| vPvB | No | | |

12.6. Endocrine Disruption Properties

Not Available

12.7. Other adverse effects

Not Available

SECTION 13 Disposal considerations

13.1. Waste treatment methods

| | |
|------------------------------|---|
| Product / Packaging disposal | <ul style="list-style-type: none"> Containers may still present a chemical hazard/ danger when empty. Return to supplier for reuse/ recycling if possible. <p>Otherwise:</p> <ul style="list-style-type: none"> If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. <p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</p> <ul style="list-style-type: none"> DO NOT allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal. In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. Recycle wherever possible. Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or incineration in a licensed apparatus (after admixture with suitable combustible material). |
| | |
| Waste treatment options | Not Available |
| Sewage disposal options | Not Available |

SECTION 14 Transport information

Labels Required

| | |
|------------------|----------------|
| Marine Pollutant | NO |
| HAZCHEM | Not Applicable |

Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

| | | |
|------------------------------------|--------------------------------|----------------|
| 14.1. UN number | Not Applicable | |
| 14.2. UN proper shipping name | Not Applicable | |
| 14.3. Transport hazard class(es) | Class | Not Applicable |
| | Subrisk | Not Applicable |
| 14.4. Packing group | Not Applicable | |
| 14.5. Environmental hazard | Not Applicable | |
| 14.6. Special precautions for user | Hazard identification (Kemler) | Not Applicable |
| | Classification code | Not Applicable |
| | Hazard Label | Not Applicable |

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| | | |
|--|-------------------------|----------------|
| | Special provisions | Not Applicable |
| | Limited quantity | Not Applicable |
| | Tunnel Restriction Code | Not Applicable |

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

| | | |
|------------------------------------|---|----------------|
| 14.1. UN number | Not Applicable | |
| 14.2. UN proper shipping name | Not Applicable | |
| 14.3. Transport hazard class(es) | ICAO/IATA Class | Not Applicable |
| | ICAO / IATA Subrisk | Not Applicable |
| | ERG Code | Not Applicable |
| 14.4. Packing group | Not Applicable | |
| 14.5. Environmental hazard | Not Applicable | |
| 14.6. Special precautions for user | Special provisions | Not Applicable |
| | Cargo Only Packing Instructions | Not Applicable |
| | Cargo Only Maximum Qty / Pack | Not Applicable |
| | Passenger and Cargo Packing Instructions | Not Applicable |
| | Passenger and Cargo Maximum Qty / Pack | Not Applicable |
| | Passenger and Cargo Limited Quantity Packing Instructions | Not Applicable |
| | Passenger and Cargo Limited Maximum Qty / Pack | Not Applicable |

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

| | | |
|------------------------------------|--------------------|----------------|
| 14.1. UN number | Not Applicable | |
| 14.2. UN proper shipping name | Not Applicable | |
| 14.3. Transport hazard class(es) | IMDG Class | Not Applicable |
| | IMDG Subrisk | Not Applicable |
| 14.4. Packing group | Not Applicable | |
| 14.5. Environmental hazard | Not Applicable | |
| 14.6. Special precautions for user | EMS Number | Not Applicable |
| | Special provisions | Not Applicable |
| | Limited Quantities | Not Applicable |

Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

| | | |
|------------------------------------|---------------------|----------------|
| 14.1. UN number | Not Applicable | |
| 14.2. UN proper shipping name | Not Applicable | |
| 14.3. Transport hazard class(es) | Not Applicable | Not Applicable |
| 14.4. Packing group | Not Applicable | |
| 14.5. Environmental hazard | Not Applicable | |
| 14.6. Special precautions for user | Classification code | Not Applicable |
| | Special provisions | Not Applicable |
| | Limited quantity | Not Applicable |
| | Equipment required | Not Applicable |
| | Fire cones number | Not Applicable |

14.7. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

14.8. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

| Product name | Group |
|-------------------------------|---------------|
| 1,2-benzisothiazoline-3-one | Not Available |
| 2-methyl-4-isothiazolin-3-one | Not Available |

14.9. Transport in bulk in accordance with the ICG Code

| Product name | Ship Type |
|-----------------------------|---------------|
| 1,2-benzisothiazoline-3-one | Not Available |

Continued...

| Product name | Ship Type |
|-------------------------------|---------------|
| 2-methyl-4-isothiazolin-3-one | Not Available |

SECTION 15 Regulatory information

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

| | |
|--|---|
| 1,2-benzisothiazoline-3-one is found on the following regulatory lists | |
| Great Britain GB Biocidal Active Substances | Great Britain GB mandatory classification and labelling list (GB MCL) |
| 2-methyl-4-isothiazolin-3-one is found on the following regulatory lists | |
| Great Britain GB Biocidal Active Substances | Great Britain GB mandatory classification and labelling list (GB MCL) |

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : Directives 98/24/EC, - 92/85/EEC, - 94/33/EC, - 2008/98/EC, - 2010/75/EU; Commission Regulation (EU) 2020/878; Regulation (EC) No 1272/2008 as updated through ATPs.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

ECHA SUMMARY

| Ingredient | CAS number | Index No | ECHA Dossier | |
|-------------------------------|---|--------------|--------------------------------|--|
| 1,2-benzisothiazoline-3-one | 2634-33-5 | 613-088-00-6 | Not Available | |
| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s) | | Pictograms Signal Word Code(s) | Hazard Statement Code(s) |
| 1 | Skin Sens. 1; Aquatic Chronic 3; Skin Irrit. 2; Eye Irrit. 2; Aquatic Chronic 4; Skin Corr. 1C; Acute Tox. 4; Acute Tox. 4; STOT SE 3 | | GHS05; Dgr | H317; H412; H319; H314; H302; H312; H332; H335 |
| 2 | Skin Sens. 1; Aquatic Chronic 3; Eye Irrit. 2; Skin Corr. 1C; Acute Tox. 4; Acute Tox. 4; Acute Tox. 4; STOT SE 3 | | GHS05; Dgr | H317; H412; H319; H314; H302; H312; H332; H335 |

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

| Ingredient | CAS number | Index No | ECHA Dossier | |
|-------------------------------|---|--------------|--------------------------------|--|
| 2-methyl-4-isothiazolin-3-one | 2682-20-4 | 613-326-00-9 | Not Available | |
| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s) | | Pictograms Signal Word Code(s) | Hazard Statement Code(s) |
| 1 | Skin Sens. 1; Aquatic Chronic 3; Skin Irrit. 2; Eye Irrit. 2; Aquatic Chronic 4; Skin Corr. 1C; Acute Tox. 4; Acute Tox. 4; STOT SE 3 | | GHS05; Dgr | H317; H412; H319; H314; H302; H312; H332; H335 |
| 2 | Skin Sens. 1; Aquatic Chronic 3; Eye Irrit. 2; Skin Corr. 1C; Acute Tox. 4; Acute Tox. 4; Acute Tox. 4; STOT SE 3 | | GHS05; Dgr | H317; H412; H319; H314; H302; H312; H332; H335 |

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

National Inventory Status

| National Inventory | Status |
|--|---|
| Australia - AIIIC / Australia Non-Industrial Use | Yes |
| Canada - DSL | Yes |
| Canada - NDSL | No (1,2-benzisothiazoline-3-one; 2-methyl-4-isothiazolin-3-one) |
| China - IECSC | Yes |
| Europe - EINEC / ELINCS / NLP | Yes |
| Japan - ENCS | Yes |
| Korea - KECI | Yes |
| New Zealand - NZIoC | Yes |
| Philippines - PICCS | Yes |
| USA - TSCA | Yes |
| Taiwan - TCSI | Yes |
| Mexico - INSQ | Yes |
| Vietnam - NCI | Yes |
| Russia - FBEPH | Yes |
| Legend: | Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration. |

SECTION 16 Other information

| | |
|---------------|------------|
| Revision Date | 14/10/2022 |
| Initial Date | 01/06/2022 |

Full text Risk and Hazard codes

| | |
|------|---------------------|
| H301 | Toxic if swallowed. |
|------|---------------------|

Aro-Bond 537 (Aro-Bond DX5949)

| | |
|------|---|
| H302 | Harmful if swallowed. |
| H311 | Toxic 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. |
| H319 | Causes serious eye irritation. |
| H330 | Fatal if inhaled. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

SDS Version Summary

| Version | Date of Update | Sections Updated |
|---------|----------------|-------------------|
| 1.5 | 14/10/2022 | Ingredients, Name |

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

EN 166 Personal eye-protection
EN 340 Protective clothing
EN 374 Protective gloves against chemicals and micro-organisms
EN 13832 Footwear protecting against chemicals
EN 133 Respiratory protective devices

Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average
PC—STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit.
IDLH: Immediately Dangerous to Life or Health Concentrations
ES: Exposure Standard
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index
AIIC: Australian Inventory of Industrial Chemicals
DSL: Domestic Substances List
NDSL: Non-Domestic Substances List
IECSC: Inventory of Existing Chemical Substance in China
EINECS: European INventory of Existing Commercial chemical Substances
ELINCS: European List of Notified Chemical Substances
NLP: No-Longer Polymers
ENCS: Existing and New Chemical Substances Inventory
KECI: Korea Existing Chemicals Inventory
NZIoC: New Zealand Inventory of Chemicals
PICCS: Philippine Inventory of Chemicals and Chemical Substances
TSCA: Toxic Substances Control Act
TCSI: Taiwan Chemical Substance Inventory
INSQ: Inventario Nacional de Sustancias Químicas
NCI: National Chemical Inventory
FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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