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## Material Safety Data Sheet

### 1,2-Benzisothiazolin-3-One

#### Section 1: Chemical Product and Company Identification

**Molecular formula:** C7H5NOS

**CAS Nr:** 2634-33-5

**Molecular weight:** 151.18

**Synonyms:** BIT

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#### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	%By Weight
1,2-Benzisothiazolin-3-One	2634-33-5	99

### Section 3: Hazards Identification

#### Classification of the substance or mixture

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.

#### GHS Label elements, including precautionary statements



**Signal word:** Danger

**Hazard statement(s):** Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. Very toxic to aquatic life.

#### Precautionary statement(s):

**Prevention:** Wear protective gloves/eye protection/face protection. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid release to the environment.

**Response:** IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Collect spillage.

**Storage:** /

**Disposal:** Dispose of contents/container to in accordance with national regulations.

**Other hazards which do not result in classification:** /

### Section 4: First Aid Measures

#### Description of necessary first aid measures

**If inhaled:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact:** Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed:** IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY. INDUCE vomiting with fingers down the back of the throat, ONLY IF CONSCIOUS. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

**Most important symptoms and effects, both acute and delayed:** /

**Indication of immediate medical attention and special treatment needed:** /

### Section 5: Fire and Explosion Data

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special hazards arising from the chemical:** Combustible solid, clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air.

**Special protective actions for fire-fighters:** Wear self-contained breathing apparatus for firefighting if necessary. Use water spray to cool unopened containers.

## Section 6: Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:** Avoid contact with skin and eyes. Control personal contact by using protective equipment.

**Environmental precautions:** Use dry clean up procedures and avoid generating dust. Place in a suitable, labelled container for waste disposal. Environmental hazard - contain spillage.

**Methods and materials for containment and cleaning up:** 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 shoveled into a drum and treated with an 11% solution of sodium metabisulfite ( $\text{Na}_2\text{S}_2\text{O}_5$ ) or sodium bisulfite ( $\text{NaHSO}_3$ ), or 12% sodium sulfite ( $\text{Na}_2\text{SO}_3$ ) and 8% hydrochloric acid (HCl). Glutathione has also been used to inactivate the isothiazolinones. Use 20 volumes of decontaminating solution for each volume of biocide, and let containers stand for at least 30 minutes to deactivate microbicide before disposal

## Section 7: Handling and Storage

**Precautions for safe handling:** Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps

**Conditions for safe storage, including any incompatibilities:** Store in original containers. Keep containers securely sealed. Store in a cool, dry area protected from environmental extremes. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks.

## Section 8: Exposure Controls/Personal Protection

### Control parameters:

Source	Material	TWA mg/m <sup>3</sup>
New Zealand Workplace Exposure Standards (WES)	1,2-benzisothiazolin-3-one	10mg/m <sup>3</sup> Inhalable dust; 3mg/m <sup>3</sup> Respirable dust

**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.

### Personal protective equipment

**Eye/face protection:** Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.

**Skin protection:** Wear chemical protective gloves, eg. PVC. Wear safety footwear or safety gumboots, eg. Rubber. Impervious clothing, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection:** Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant.

**Section 9: Physical and Chemical Properties**

<b>Appearance</b>	Divided solid
<b>Odour</b>	/
<b>Odour Threshold</b>	/
<b>pH</b>	/
<b>Melting point/freezing point</b>	155-158°C
<b>Initial boiling point and boiling range</b>	/
<b>Flash point</b>	/
<b>Evaporation rate</b>	/
<b>Flammability (solid, gas)</b>	/
<b>Upper/lower flammability or explosive limits</b>	/
<b>Vapour pressure</b>	5.9 x 10 <sup>-8</sup> kPa (20°C)。
<b>Vapour density</b>	/
<b>Relative density</b>	/
<b>Water solubility</b>	soluble
<b>Partition coefficient: noctanol/water</b>	/
<b>Autoignition temperature</b>	/
<b>Decomposition temperature</b>	/
<b>Viscosity</b>	

**Section 10: Stability and Reactivity Data**

**Reactivity:** /

**Chemical stability:** /

**Possibility of hazardous reactions:** /

**Conditions to avoid:** Heat, flames and sparks. Extremes of temperature and direct sunlight.

**Incompatible materials:** Strong oxidizing agents

**Hazardous decomposition products:** /

**Section 11: Toxicological Information****Acute health effects**

**Inhalation:** the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.

**Ingestion:** May be harmful if swallowed.

**Skin:** This material can cause inflammation of the skin on contact in some persons.

**Eyes:** If applied to the eyes, this material causes severe eye damage.

**Chronic health effects:** Skin contact with the material is more likely to cause a sensitisation reaction

**Numerical measures of toxicity(such as acute toxicity estimates):** Oral (rat) LD<sub>50</sub>: 1020 mg/kg; Oral (mouse) LD<sub>50</sub>: 1150 mg/kg.

**Section 12: Ecological Information**

**Toxicity:** Very toxic to aquatic organisms  
**Persistence and degradability:** Water/Soil: HIGH.  
**Bioaccumulative potential:** LOW.  
**Mobility in soil:** MED.  
**Other adverse effects:** /

### Section 13: Disposal Considerations

**Disposal methods:** Recycle wherever possible. Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material).

### Section 14: Transport Information

**UN number:** 3077  
**UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
**Transport hazard class(es):** 9.  
**Packaging group:** III  
**Environmental hazards:** YES  
**Special precautions for user:** /

### Section 15: Other Regulatory Information

**Regulations:** 1,2-benzisothiazolin-3-one (CAS: 2634-33-5) is found on the following regulatory lists: "China Inventory of Existing Chemical Substances". This safety data sheet is in compliance with the following national standards: GB16483-2008, GB13690-2009, GB6944-2005, GB/T 15098-2008, GB18218-2009, GB15258-2009, GB6944-2005, GB190-2009, GB191-2009, GB12268-2008, GA57-1993, GB/T 15098-2008, GBZ 2-2007 as well as the following national regulations: Dangerous Goods Transport Administrative Regulation, Dangerous Chemicals Safety Administrative Regulation, United Nations Regulations on the Transport of Dangerous Goods (UN RTDG)

### Section 16: Other Information

**References:** Not available.  
**Other Special Considerations:** Not available.  
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