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## Material Safety Data Sheet

### **2-Butyl-1,2-benzisothiazolin-3-one**

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

**Molecular formula:** C<sub>11</sub>H<sub>13</sub>NOS

**CAS Nr:** 4299-07-4

**Molecular weight:** 207.29

**Synonyms:** 2-Butyl-1,2-benzisothiazolin-3-one, BBIT

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

##### **Composition:**

<b>Name</b>	<b>CAS #</b>	<b>%By Weight</b>
2-Butyl-1,2-benzisothiazolin-3-one	4299-07-4	98

### Section 3: Hazards Identification

#### Classification of the substance or mixture

Skin Corrosion/Irritation Category 1B, Serious Eye Damage Category 1, Skin Sensitizer Category 1, Acute Aquatic Hazard Category 1, Chronic Aquatic Hazard Category 1

#### GHS Label elements, including precautionary statements



**Signal word:** Danger

**Hazard statement(s):** Causes severe skin burns and eye damage. May cause an allergic skin reaction. Very toxic to aquatic life with long lasting effects.

#### Precautionary statement(s):

**Prevention:** Do not breathe dust/fume/gas/mist/vapors/spray. Wash ... thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

**Response:** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see below). IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. Specific treatment (see below). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Collect spillage.

**Storage:** Store locked up.

**Disposal:** Dispose of contents/container to...

**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 do NOT induce vomiting. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Consult a physician.

**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:** Water spray or fog. Foam. Dry chemical powder. BCF (where regulations permit). Carbon dioxide.

**Special hazards arising from the chemical:** Combustible. Slight fire hazard when exposed to heat or flame. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit

toxic fumes of carbon monoxide (CO). May emit acrid smoke. Mists containing combustible materials may be explosive.

**Special protective actions for fire-fighters:** Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use water delivered as a fine spray to control fire and cool adjacent area. Avoid spraying water onto liquid pools. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.

## Section 6: Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:** Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material. Check regularly for spills and leaks. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment.

**Environmental precautions:** Stop leak if safe to do so.

**Methods and materials for containment and cleaning up:** Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Neutralise/decontaminate residue. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains.

## Section 7: Handling and Storage

**Precautions for safe handling:** DO NOT allow clothing wet with material to stay in contact with skin. 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. DO NOT enter confined spaces until atmosphere has been checked. Avoid smoking, naked lights or ignition sources. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers.

**Conditions for safe storage, including any incompatibilities:** Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this MSDS.

## Section 8: Exposure Controls/Personal Protection

**Control parameters:** /

**Appropriate engineering controls:** Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances.

### 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. When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.

**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.

Thermal hazards: /

## Section 9: Physical and Chemical Properties

Appearance	Orange-yellow liquid
Odour	/
Odour Threshold	/
pH	/
Melting point/freezing point	/
Initial boiling point and boiling range	/
Flash point	/
Evaporation rate	/
Flammability (solid, gas)	/
Upper/lower flammability or explosive limits	/
Vapour pressure	/
Vapour density	/
Relative density	/
Water solubility	Partly Miscible
Partition coefficient: noctanol/water	/
Autoignition temperature	/
Decomposition temperature	/
Viscosity	/

## Section 10: Stability and Reactivity Data

Reactivity: /

**Chemical stability:** Product is considered stable.

**Possibility of hazardous reactions:** Avoid reaction with oxidising agents.

**Conditions to avoid:** Heat, flames and sparks.

**Incompatible materials:** Acids, alkalies, oxidizing agents.

**Hazardous decomposition products:** carbon dioxide (CO<sub>2</sub>), sulfur oxides (SO<sub>x</sub>), other pyrolysis products typical of burning organic material.

## Section 11: Toxicological Information

**Information on the likely routes of exposure:** Inhaled, Ingestion, skin, eyes.

**Symptoms related to the physical, chemical and toxicological characteristics:** /

**Acute health effects**

**Inhalation:** The material is not thought to produce adverse health effects following inhalation. Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route.

**Ingestion:** The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion.

**Skin:** The material can produce chemical burns following direct contact with the skin.

**Eyes:** The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.

**Chronic health effects:** Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue. Gastrointestinal disturbances may also occur. Chronic exposures may result in dermatitis and/or conjunctivitis. Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals.

**Numerical measures of toxicity (such as acute toxicity estimates):** /

## Section 12: Ecological Information

**Toxicity:** Very toxic to aquatic life with long lasting effects.

**Persistence and degradability:** /

**Bioaccumulative potential:** /

**Mobility in soil:** /

**Other adverse effects:** /

## Section 13: Disposal Considerations

**Disposal methods:** Recycle wherever possible or consult manufacturer for recycling options. Consult State Land Waste Authority for disposal. Bury or incinerate residue at an approved site. Recycle containers if possible, or dispose of in an authorised landfill.

## Section 14: Transport Information

**UN number:** 1760.

**UN proper shipping name:** CORROSIVE LIQUID, N.O.S.

**Transport hazard class(es):** 8.

**Packaging group:** II.

**Environmental hazards:** Marine pollutant.

**Special precautions for user:** /

## Section 15: Other Regulatory Information

**Regulations:** This safety data sheet is in compliance with the following national standards: GB16483-2008, GB13690-2009, GB18218-2009, GB15258-2009, GB6944-2012, 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

## Section 16: Other Information

**References:** "Model Regulations on the Transport of Dangerous Goods"

"The Globally Harmonized System of Classification and Labelling of Chemicals"

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