

Bromadiolone -MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

ZHEJIANG RAYFULL CHEMICALS CO.,LTD

ADD: NO.113 PUXING ROAD, PUZHOU INDUSTRIAL PARK, LONGWAN DISTRICT,
WENZHOU ZHEJIANG P.R. CHINA

Tel: +86-577-88905587

Fax: +86-577-88905567

Email: info@rayfull.com

sales@rayfull.com

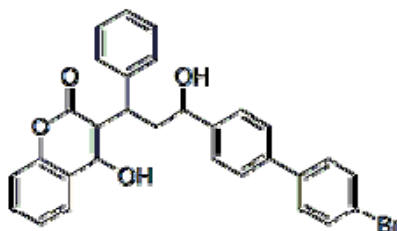
1. Chemical Product Identification

Product Name: Bromadiolone

Molecular Formula: C₃₀H₂₃BrO₄

Molecular Weight: 527.40

Structural Formula:



Chemical Name: 3-[3-[4-(4-bromophenyl)phenyl]-3-hydroxy-1-phenylpropyl]-2-hydroxychromen-4-one

Form: Powder

Color: Yellow

Odor: Not applicable

CAS No.: 28772-56-7

2. Composition / Information On Ingredients

| Composition | CAS No. | Content % |
|-------------------|------------|-----------|
| Bromadiolone | 28772-56-7 | 96.0 |
| Other ingredients | | 4.0 |

3. Hazards Identification

Ingestion: Spontaneous emesis may occur.

Inhalation: The compound is toxic by oral exposure.

Skin: Ecchymoses and hematomas occur due to reduced clotting capacity.

Eyes: See inhalation

Hazards: Fire may produce irritating or poisonous gases. Runoff from fire control water may give off poisonous gases. Runoff from fire control or dilution water may cause pollution. When heated to decomposition, it emits toxic fumes of bromine containing compounds.

4. First Aid Measures

Skin: Remove contaminated clothing and wash exposed area thoroughly with soap and water. A physician should examine the area if irritation or pain persists. Vitamin k1 (phytonadione) - is a specific antidote and should be administered to any patient with a prolonged pt or inr. Menadione (vitamin k3) should not be used.

Eyes: If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

Inhalation: Move patient to fresh air. Monitor for respiratory distress. If cough or difficulty breathing develops, evaluate for respiratory tract irritation, bronchitis, or pneumonitis. Administer oxygen and assist ventilation as required. Treat bronchospasm with beta2 agonist and corticosteroid aerosols.

Ingestion: Emesis is contraindicated in patients with a prolonged pt and inr due to the risk of bleeding following ipecac-induced increased intracranial pressure. Ipecac may be indicated in the home setting for pediatric patients with an accurate history of recent one-time acute ingestion of these rodenticides. Emesis: use is controversial. May be indicated in the prehospital setting if administered soon (within 30 minutes) after substantial ingestion.

5. Fire-Fighting Measures

Flammable/combustible/non-flammable: Combustible.

Flash point: Not applicable.

Fire extinguishing media: Water, dry chemical, foam, carbon dioxide or halones.

Special fire fighting procedures: None required.

Explosion hazard: None.

Fire Fighting: (Non-Specific -- Coumarin Derivative Pesticide, Solid, n.o.s.) This material may burn but does not ignite readily. Container may explode in heat of fire. Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas. Ventilate closed spaces before entering them. Wear positive pressure breathing apparatus and special protective clothing. Remove and isolate contaminated clothing at the site. If water pollution occurs, notify appropriate authorities. (Non- Specific -

Coumarin Derivative Pesticide, Solid, n.o.s.) Small fires: dry chemicals, carbon dioxide, water spray or foam. Large fires: water spray, fog or foam. Move container from fire area if you can do so without risk. Fight fire from maximum distance. Dike fire control water for later disposal; do not scatter the material.

6. Accidental Release Measures

Small spills/leaks: (Non-Specific -- Coumarin Derivative, Pesticide, Solid, n.o.s.) Do not touch spilled material; stop leak if you can do so without risk. Use water spray to reduce vapors. Small spills: absorb with sand or other non-combustible absorbent material and place into containers for later disposal. Small dry spills: with clean shovel place material into clean, dry container and cover; move containers from spill area. Large spills: dike far ahead of spill for later disposal.

7. Handling and Storage

Handling: All chemicals should be considered hazardous. Avoid direct physical contact. Use appropriate, approved safety equipment. Untrained individuals should not handle this chemical or its container. Handling should occur in a chemical fume hood.

Storage: Keep in a cool, dry, dark location in a tightly sealed container or cylinder. Keep away from incompatible materials, ignition sources and untrained individuals. Secure and label area. Protect containers/cylinders from physical damage.

8. Exposure Controls/Personal Protection

Personal Protection: Consult label for cautions specific to product being used & for protective clothing for concentrate > 1%.

Respirators: Use NIOSH/MSHA approved respirator appropriate for exposure of concern.

Poison Class: 1

9. Physical and Chemical Properties

Appearance: Yellowish powder.

Melting Point: 200-210°C

Vapor Pressure: 2.13mPa at 25°C

Partition coefficient: Log P_{OW} =4.27

Solubility: In water at 20°C 18.4mg/l; In organic solvents at 20°C: 25g/l in Ethyl acetate, 22.3g/l in Acetone, 8.2g/l in Ethanol, 5.6 in Methanol

10. Stability and Reactivity

Stability: Stable.

Hazardous polymerisation: Will not occur.

Incompatible materials: None.

Hazardous decomposition products: None.

Conditions to avoid: None.

11. Toxicological Information

Acute oral LD₅₀ for rodents and non-rodents: 1-3 mg/kg

Acute oral LD₅₀ for mice: 1.75 mg/kg

Acute oral LD₅₀ for rat: 1.125 mg/kg

Acute oral LD₅₀ for cat: 25.0 mg/kg

Acute oral LD₅₀ for dog: >10 mg/kg

Acute dermal LD₅₀ for rat: 1.71mg/kg

Acute dermal LD₅₀ for rabbits: 9.4 mg/kg.

Inhalation LD₅₀ for rat: 200mg/m³

Skin: Non-irritant to the skin

EYE: Slight irritant to the eyes

Signs of poisoning are those associated with an increased tendency to bleed. In feeding studies on rats, the only effect found has been that associated with anticoagulant action. In a 12-week feeding study on rats, the maximum tolerated dose was 10 µg/kg body weight per day. Mutagenicity and teratogenicity studies have not shown any mutagenic, embryotoxic, or teratogenic effects.

12. Ecological and Ecotoxicological Information

Moderate toxic to fish

LC₅₀ for catfish (48h): 3mg/l

Moderate toxic to aquatic invertebrates

LC₅₀ for Daphnia magna: 8.8mg/l

Low toxic to birds

LD₅₀ for quail: 1690mg/kg

LD₅₀ for mallard: 1000mg/kg

General: Bromadiolone is classified as harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment. However, when used in accordance with instructions given, controlled release of this product is not expected to cause environmental contamination.

13. Disposal Considerations

Disposal of waste: Bait and bait containers must be burned or buried. All rodent bodies must also be burned or buried. Do not place in refuse bins or on rubbish tips.

Disposal of containers: Empty container completely and dispose of safely. Burn or bury in accordance with local authority regulations.

14. Transport Information

Not applicable.

15. Regulatory Information

Not applicable.

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.