

Safety Data Sheet



1. Identification

Product Information: 53453000
Family: 557
Product Name: BROMO EN TABLETAS BT 453
Recommended Use: Additive
Supplied by/Manufacturer: SUR QUIMICA S.A.
 Calle 38, contiguo al Cementerio La Uruca.
 San José, Costa Rica, Centroamérica
 Tel Información: (506) 2211-3700,
 Fax: (506) 2256-0690
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Safety Data Sheet Coordinator: sds@gruposur.com

2. Hazards Identification

GHS Classification

Acute Tox. 4 Oral, Aquatic Acute 1, Ox. Sol. 2, Skin Corr. 1, Skin Sens. 1

Symbol(s) of Product



Signal Word
 Danger

GHS HAZARD STATEMENTS

Acute Toxicity, Oral, category 4	H302	Harmful if swallowed.
Acute Toxicity, Dermal, category 5	H313	May be harmful in contact with skin.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, Acute, category 1	H400	Very toxic to aquatic life.
Oxidising Solid, category 2	H272	May intensify fire; oxidiser.
Skin Corrosion, category 1	H314	Causes severe skin burns and eye damage.

GHS LABEL PRECAUTIONARY STATEMENTS

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P221	Take any precaution to avoid mixing with combustibles...
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash skin thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTRE/doctor/... if you feel unwell.

P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use materials indicated in Section 5 to extinguish.
P391	Collect spillage.
P405	Store locked up.
P501	Remove the contents / container according to the General Regulation for the Classification and Management of Hazardous Waste No. 41527-S-MINAE (Applies to Costa Rica). Dispose of contents/container in accordance with local/regional/national/international regulations.

GHS SDS PRECAUTIONARY STATEMENTS

P220	Keep away from clothing and other combustible materials.
P270	Do not eat, drink or smoke when using this product.
P363	Wash contaminated clothing before reuse.

3. Composition/Information on Ingredients

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Wt. %</u>	<u>GHS Symbols</u>	<u>GHS Statements</u>
1-bromo-3-cloro-5,5-dimetilhidantoina	16079-88-2	90-100	GHS05-GHS07-GHS09	H302-313-314-317-400

The text for GHS Hazard Statements shown above (if any) is given in the "Other information" Section.

4. First-aid Measures

FIRST AID - INHALATION: Artificial respiration and/or oxygen may be necessary. Keep the victim calm. Ensure that medical personnel are aware of the materials involved and take precautions to protect themselves. Oxygen or artificial respiration if needed. If inhaled, remove to fresh air. Give oxygen if necessary. Consult a physician if symptoms persist or exposure is severe.

FIRST AID - SKIN CONTACT: Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and badly. Wash off immediately with plenty of water. Wash off with warm water. In case of contact, wash skin immediately with soap and water. In case of contact, immediately flush skin with plenty of water while removing contaminated clothing and shoes.

FIRST AID - EYE CONTACT: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

FIRST AID - INGESTION: If ingested, do not induce vomiting. If conscious, drink 8-10 oz. of water promptly. Call a physician immediately.

5. Fire-fighting Measures

UNUSUAL FIRE AND EXPLOSION HAZARDS: It favors the formation of fires due to the release of oxygen

SPECIAL FIREFIGHTING PROCEDURES: Do not use a solid water stream as it may scatter and spread fire. Evacuate personnel to safe areas. Contact with incompatible materials or exposure to temperatures exceeding SADT may result in a self-accelerating decomposition reaction with release of flammable vapors which may auto-ignite. The product burns violently. Flash back possible over considerable distance. Vapors may form explosive mixtures with air. Cool closed containers exposed to fire with water spray. In the event of fire and/or explosion do not breathe fumes. In the event of fire, cool tanks with water spray. In the event of fire, wear self-contained breathing apparatus. Move containers from fire area if you can do it without risk. All these products have a very low flash point: Use of water spray when fighting fire may be inefficient. Use a self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode. Flammable. Cool fire-exposed containers using water spray. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

EXTINGUISHING MEDIA: None Known

6. Accidental Release Measures

ENVIRONMENTAL MEASURES: Do not allow to enter drains, sewers, or sewers. Inform the authorities in the event of a leak in natural water courses or in the sewage system.

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contact the proper local authorities. DO NOT CLEAN OR DISPOSE, EXCEPT UNDER THE SUPERVISION OF A SPECIALIST. Cover with dry sodium carbonate. Flush into sewer with plenty of water. Flush with water. Keep combustible materials (wood, paper, oil, etc.) away from spilled material. Do not touch damaged containers or spilled material, unless you are wearing appropriate protective clothing. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). With clean shovel, place material into clean, dry container and cover loosely; move containers from spill area. Wet down with water and dike for later disposal.

7. Handling and Storage



HANDLING: Handle in accordance with good industrial hygiene and safety practice. IATA prohibits air cargo transport. Keep out of reach of children. Hazardous residue may remain in emptied container. Do not reuse empty containers without commercial cleaning or reconditioning. Use in well ventilated area.

STORAGE: Keep containers tightly closed. Keep in a dry, cool and well-ventilated place. Once used, the container should be closed and keep in a well ventilated area and in vertical position to prevent losses. Keep containers closed when not in use.

8. Exposure Controls/Personal Protection

Ingredients with Occupational Exposure Limits

<u>Chemical Name</u>	<u>ACGIH TLV-TWA</u>	<u>ACGIH-TLV STEL</u>	<u>OSHA PEL-TWA</u>	<u>OSHA PEL-CEILING</u>
1-bromo-3-cloro-5,5-dimetilhidantoína	N.E.	N.E.	N.E.	N.E.

Further Advice: MEL = Maximum Exposure Limit OES = Occupational Exposure Standard SUP = Supplier's Recommendation
Sk = Skin Sensitizer N.E. = Not Established

Personal Protection



RESPIRATORY PROTECTION: In case of inadequate ventilation wear respiratory protection.



SKIN PROTECTION: Rubber or plastic gloves. Gloves should be inspected before use. Use the correct technique to remove the gloves (without touching the exterior surface) to prevent skin contact with the product.



EYE PROTECTION: Safety glasses with side-shields to prevent possible splashing of the product. Wear chemical goggles and faceshield (if not wearing a full facepiece respirator). Wear approved eye protection according to applicable governmental regulations.



OTHER PROTECTIVE EQUIPMENT: When required, according to the concentration of the product, wear chemical protective clothing with limited thermal protection.



HYGIENIC PRACTICES: Wash hands and face before breaks and immediately after handling the product. Contaminated clothing should be changed and washed before reuse. Eating, drinking and smoking in immediate work area should be prohibited.

9. Physical and Chemical Properties

Appearance:	Granulated	Physical State:	Solid
Odor:	Characteristic	Odor Threshold, ppb:	No Information
Density, g/ml:	1.000	pH:	No Information
Freeze Point, °C:	No Information	Viscosity, cP:	n.a.
Solubility in Water:	Sí	Partition Coefficient, n-octanol/water:	No Information
Decomposition temperature, °C	No Information		
Boiling Range, °C:	0 - 0	Explosive Limits, %:	0.0 - 99.0
Combustibility:	Sin Información	Flash Point, °C:	142
Evaporation Rate:	No Information	Auto-Ignition Temperature, °C	No Information
Vapor Density:	No Information	Vapor Pressure, mmHg:	No Information

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

STABILITY: Stable under recommended storage conditions. Protect from contamination. Contact with incompatible substances can cause decomposition at or below SADT. Heat, flames and sparks. Avoid confinement.

CONDITIONS TO AVOID: Keep away from sources of ignition: heat, flame and sparks. Avoid formation of dust and aerosols.

INCOMPATIBILITY: Contact with water or heating causes the release of oxygen. Risk of explosion with: Alkali metals, aluminum chloride, ammonia, ammonium compounds, barium nitrate, flammable substances, carbides, charcoal, chlorates chlorites, 2,4 dinitrotoluene, esters, urea, ferric compounds, potassium, potassium permanganate, hydrocarbons, copper compounds, nitro compounds, oils, perchlorates powdered metals, powdered aluminum, reducing agents, sodium oxides, sodium hypochlorite, sulfur, wood / sawdust, sugar, organic substances, hypochlorous acid, organic nitro compounds, aluminum, antimony, bismuth, lead, cadmium, chromium, iron, copper, magnesium, manganese, nickel, zinc, tin, mild steel, powdery, water with heat, metal oxides, charcoal, acetic anhydride, nitric acid, Danger of ignition or formation of combustible gases or vapors with: potassium dichromate, nitrites, metals, phosphorus, acetic acid, with heat, exothermic reaction with: metal chlorides, halogenates, sulfides, organic nitrocompounds, oxidants, alkalis, acidic nonmetals. Accelerators, strong acids and bases, heavy metals and heavy metal salts, reducing agents Reactive or incompatible with the following materials: combustible materials, reducing materials, copper, iron, rust. Keep away from strong oxidizing agents, heat and open flames.

HAZARDOUS DECOMPOSITION PRODUCTS: Self-accelerating decomposition temperature SADT 60 °C (lowest temperature at which a self-accelerating decomposition reaction can occur). Irritant, caustic, flammable, noxious/toxic gases and vapours can develop in the case of fire and decomposition Thermal decomposition can lead to release of irritating gases and vapors.

11. Toxicological Information



Practical Experiences

INFORMATION ON TOXICOLOGICAL EFFECTS

Acute Toxicity: No Information

Skin corrosion/irritation: No Information

Serious eye damage/eye irritation: May cause moderate eye irritation. May cause moderate corneal injury. Vapor may cause eye irritation experienced as mild discomfort and redness. Vapor may cause lacrimation (tears).

Respiratory or skin sensitisation: No Information

Germ cell mutagenicity: No Information

Carcinogenicity: No Information

Reproductive toxicity: No Information

Specific target organ toxicity - single exposure: No Information

Specific target organ toxicity - repeated exposure: No Information

Aspiration hazard: No Information

Acute Toxicity Values

The acute effects of this product have not been tested. Data on individual components are tabulated below

CAS-No.	Chemical Name	Oral LD50	Dermal LD50 (mg/kg)	Vapor LC50
16079-88-2	1-bromo-3-cloro-5,5-dimetilhidantoína	485 mg/kg	>2000	>20

N.I. = No Information

Toxicidad Dermal del producto: 2,000.00 mg/kg

12. Ecological Information

Toxicity: No Information

Persistence and Degradability: No Information

Bioaccumulative potential: No Information

Mobility in the soil: No Information

Other adverse effects: No Information

13. Disposal Information

DISPOSAL METHOD: Prevent entry into waterways, sewers, basements or confined areas.

14. Transport Information

SPECIAL TRANSPORT PRECAUTIONS: No Information

Sea Transport

UN Number:	3085
IMDG/GGVSee Class:	5.1 (8)
Packing Group:	III
Shipping Name:	Oxidizing solid, corrosive, n.o.s.*
Marine Pollutant:	Yes
Shipping Hazard(Marine Pollutant):	1-bromo-3-cloro-5,5-dimetilhidantoína



Air Transport

UN Number:	3085
ICAO/IATA Class:	5.1 (8)
Packing Group:	III
Shipping Name:	Oxidizing solid, corrosive, n.o.s.*

15. Regulatory Information

No information available

16. Other Information

Revision Date: 19/12/2024 **Supersedes Date:** New MSDS
Reason for revision: No Information
Datasheet produced by: SUR Química S.A.

Hazardous Material Information System: HMIS

Health	3	Flammability	1	Reactivity	2	Personal Protection	H	Chronic Hazard	No	Target Organ	N/A
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National Fire Protection Association: NFPA

Flammability	1	Health	3	Reactivity	2	Special Hazards	OX
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Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H302 Harmful if swallowed.
 H313 May be harmful in contact with skin.
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H400 Very toxic to aquatic life.

Icons for GHS Pictograms shown in Section 3 describing each ingredient:

GHS05



GHS07



GHS09



Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained in this safety sheet has been prepared for SUR QUIMICA S.A. based on the data provided by suppliers and manufacturers of the raw materials involved. This document is intended to be a guide for safe use according to use. The user receiving this information must be properly trained and be able to use his independent judgment to determine its applicability in particular uses. This safety data sheet (SDS) does not in any way exempt the user from knowing and complying with the good practices and rules of use applicable to their activity. The user must assume full responsibility to know and take precautions related to the use of the product. The exposure scenario is subject to revision and changes. The user must ensure that they have the latest version of the FDS. The updated versions are available on the website www.gruposur.com