

SAFETY DATA SHEET

Poisons Information Centre: 13 1126 for Australia and 0800 764 766 in New Zealand

Product Name: AstralPool Spa Bromine Tablets

This version issued: 28, October, 2021

Zodiac #
X0654200

Rev # A

Section 1 - Identification of the Material and Supplier

Chemical nature: Bromochlorodimethylhydantoin tablets
Product Name: **AstralPool Spa Bromine Tablets**
Other Names: Dihalo tablets, BCDMH tablets
Product Code: WC000328
Product Use: Spa sanitiser
Creation Date: **May, 2021**
This version issued: **October, 2021** and is valid for 5 years from this date.

Section 2 - Hazards Identification

Statement of Hazardous Nature

This product is classified as: Hazardous according to the criteria of SWA.

Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA and IMDG/IMSBC criteria.

Risk Phrases: R8, R35, R37. Contact with combustible material may cause fire. Causes severe burns. Irritating to respiratory system.

Safety Phrases: S22, S28, S38, S62, S24/25, S36/37/39. Do not breathe dust. After contact with skin, wash immediately with plenty of soap and water. In case of insufficient ventilation, wear suitable respiratory equipment. If swallowed, do not induce vomiting: seek medical advice immediately and show this SDS. Avoid contact with skin and eyes. Wear suitable protective clothing, gloves and eye/face protection.

SUSMP Classification: S6

ADG Classification: Class 5.1: Oxidising Agents, Sub Class 8 Corrosive.

UN Number: 3085, OXIDIZING SOLID, CORROSIVE N.O.S.



GHS Signal word: DANGER

HAZARD STATEMENT:

- H272: May intensify fire; oxidizer.
- H314: Causes severe skin burns and eye damage.
- H332: Harmful if inhaled.
- H335: May cause respiratory irritation.

PREVENTION

- P210: Keep away from heat, sparks, open flames and hot surfaces. - No smoking.
- P220: Keep or store away from combustible materials.
- P232: Protect from moisture.
- P233: Keep container tightly closed.
- P235: Keep cool.
- P260: Do not breathe dusts.
- P262: Do not get in eyes, on skin, or on clothing.
- P264: Wash contacted areas thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P271: Use only outdoors or in a well ventilated area.
- P281: Use personal protective equipment as required.

RESPONSE

- P335: Brush off loose particles from skin.
- P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
- P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position 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.

P309+P311 If exposed or if you feel unwell: Call a POISON CENTRE or doctor/physician.

P391: Collect spillage.

P370+P380: In case of fire: Evacuate area.

STORAGE

P405: Store locked up.

P410: Protect from sunlight.

P402+P404: Store in a dry place. Store in a closed container.

P403+P235: Store in a well-ventilated place. Keep cool.

DISPOSAL

P501: If they can not be recycled, dispose of contents to an approved waste disposal plant and containers to landfill (see Section 13 of this SDS).

Emergency Overview

Physical Description & Colour: White tablets

Odour: Bromine odour.

Major Health Hazards: causes severe burns, respiratory tract irritant, risk of serious damage to eyes.

Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc, %	TWA (mg/m ³)	STEL (mg/m ³)
1-Bromo-3-chloro-5,5-dimethylhydantoin	16079-88-2	96	not set	not set
Other non hazardous ingredients	secret	to 100	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

Section 4 - First Aid Measures

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

Inhalation: If inhalation occurs, contact a Poisons Information Centre, or call a doctor at once. Remove source of contamination or move victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.

Skin Contact: Quickly and gently brush away excess particles. Seek immediate medical attention. Remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Flush contaminated area with lukewarm, gently flowing water for at least 20-30 minutes, by the clock. DO NOT INTERRUPT FLUSHING. If necessary, keep emergency vehicle waiting (show paramedics this MSDS and take their advice). If irritation persists, repeat flushing. Seek medical attention.

Eye Contact: Quickly and gently brush particles from eyes. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 60 minutes, by the clock, while holding the eyelid(s) open. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING. If necessary, keep emergency vehicle waiting (show paramedics this MSDS and take their advice). Take care not to rinse contaminated water into the unaffected eye or onto face. Call a Poisons Information Centre or a doctor urgently. Take special care if exposed person is wearing contact lenses.

Ingestion: If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is a moderate risk of an explosion from this product if commercial quantities are involved in a fire. Firefighters should take care and appropriate precautions. The presence of this product in a fire is likely to intensify the fire due to its oxidising properties.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

Extinguishing Media: Not combustible. Only use large quantities of water to extinguish fires involving this product. Try to contain spills, minimise spillage entering drains or water courses. DO NOT use dry chemical or ammonium phosphate-based fire extinguishers due to the potential for violent reaction. Smothering is ineffective due to product's oxidising properties.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade. There is a danger of a violent reaction or explosion if significant quantities of this product are involved in a fire. Recommended personal protective equipment is full fire kit and breathing apparatus.

Flash point: Not flammable.

Upper Flammability Limit: No data.

Lower Flammability Limit: No data.

Autoignition temperature: No data.

Flammability Class: No data.

Section 6 - Accidental Release Measures

Accidental release: This product is sold in small packages, and the accidental release from one of these is not usually a cause for concern. For minor spills, clean up, rinsing to sewer and put empty container in garbage. Although no special protective clothing is normally necessary because of occasional minor contact with this product, it is good practice to wear impermeable gloves when handling chemical products. In the event of a major spill, prevent spillage from entering drains or water courses and call emergency services.

Section 7 - Handling and Storage

Handling: Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

Storage: This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Store in a cool, well ventilated area. Check containers periodically for corrosion and leaks. Containers should be kept closed in order to minimise contamination, especially from combustible or reducing materials. Make sure that the product does not come into contact with or substances listed under "Incompatibilities" in Section 10. Check packaging - there may be further storage instructions on the label.

Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**. Exposure limits have not been established by SWA for any of the known significant ingredients in this product.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Ventilation: This product should only be used where there is ventilation that is adequate to keep exposure below the TWA levels. If necessary, use a fan.

Eye Protection: Your eyes must be completely protected from this product by splash resistant goggles with face shield. All surrounding skin areas must be covered. Emergency eye wash facilities must also be available in an area close to where this product is being used.

Skin Protection: Because of the dangerous nature of this product, make sure that all skin areas are completely covered by impermeable gloves, overalls, hair covering, apron and face shield. See below for suitable material types.

Protective Material Types: There is no specific recommendation for any particular protective material type.

Respirator: If there is a significant chance that dusts are likely to build up in the area where this product is being used, we recommend that you use a suitable Dust Mask.

Safety deluge showers should, if practical, be provided near to where this product is being handled commercially.

Section 9 - Physical and Chemical Properties:

Physical Description & colour:	White tablets
Odour:	Bromine odour.
Boiling Point:	Not available.
Freezing/Melting Point:	No specific data. Solid at normal temperatures.
Volatiles:	No data.
Vapour Pressure:	No data.
Vapour Density:	Not applicable.
Specific Gravity:	0.96
Water Solubility:	1.5 g/L
pH:	3.4-3.6 (0.1% aqueous solution)
Volatility:	No data.

Odour Threshold:	No data.
Evaporation Rate:	Not applicable.
Coeff Oil/water Distribution:	No data
Viscosity:	Not applicable.
Decomposition temp:	>140°C
Autoignition temp:	No data.

Section 10 - Stability and Reactivity

Reactivity: This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties. This product readily reacts with oxidisable materials, and reacts exothermally with acids and alkalis – these reactions may be hazardous.

Conditions to Avoid: This product should be kept in a cool place, preferably below 30°C. Keep containers tightly closed. Containers should be kept dry. Keep containers and surrounding areas well ventilated. Keep away from sources of sparks or ignition. Protect this product from light.

Incompatibilities: water, acids, bases, reducing agents, oxidisable materials, ammonium, urea and related nitrogen compounds, combustible materials.

Fire Decomposition: Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. May form hydrogen chloride gas, other compounds of chlorine. Bromine compounds. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

Polymerisation: Polymerisation reactions are unlikely; they are not expected to occur.

Section 11 - Toxicological Information

Potential Health Effects

Inhalation:

Short Term Exposure: Product is corrosive to the respiratory tract. Symptoms will include extreme pain in nose and throat and copious secretion of mucous in the nose and throat. Other symptoms such as pulmonary oedema may also become evident, and may be life threatening if exposure is other than brief.

Long Term Exposure: Long term inhalation of high amounts of any nuisance dust may overload lung clearance mechanism. No data for health effects associated with long term inhalation.

Skin Contact:

Short Term Exposure: This product is corrosive to the skin. Capable of causing moderate to severe burns with ulceration. Can penetrate to deeper layers of skin, resulting in third degree burns. Corrosion will continue until product is removed or neutralised. Severity depends on concentration and duration of exposure. Burns may not be immediately painful; the onset of pain may be minutes to hours.

Long Term Exposure: No data for health effects associated with long term skin exposure.

Eye Contact:

Short Term Exposure: This product is very corrosive to eyes. It will quickly cause severe pain, and corrosion of the eye and surrounding facial tissues. Unless exposure is immediately treated, permanent blindness and facial scarring will occur.

Long Term Exposure: No data for health effects associated with long term eye exposure.

Ingestion:

Short Term Exposure: Significant oral exposure is considered to be unlikely. This product is likely to cause headache and gastric disturbance such as nausea and vomiting if ingested in significant quantities. This product is an oral irritant. Symptoms may include burning sensation and reddening of skin in mouth and throat. May cause chemical burns to the gastrointestinal tract if swallowed. Other symptoms may also become evident, but all should disappear once exposure has ceased.

Long Term Exposure: No data for health effects associated with long term ingestion.

Carcinogen Status:

SWA: No significant ingredient is classified as carcinogenic by SWA.

NTP: No significant ingredient is classified as carcinogenic by NTP.

IARC: No significant ingredient is classified as carcinogenic by IARC.

Target Organs: There is no data to hand indicating any particular target organs.

Classification of Hazardous Ingredients

No ingredient mentioned in the HSIS Database is present in this product at hazardous concentrations.

1-bromo-3-chloro-5,5-dimethylhydantoin: LD₅₀ Oral, Rat 578mg/kg

Section 12 - Ecological Information

Insufficient data to be sure of status.

Section 13 - Disposal Considerations

Disposal: Dispose of small quantities and empty containers by wrapping with paper and putting in garbage. For larger quantities, if recycling or reclaiming is not possible, use a commercial waste disposal service.

Section 14 - Transport Information

ADG Code: 3085, OXIDIZING SOLID, CORROSIVE N.O.S.

Hazchem Code: 1W

Special Provisions: 274

Limited quantities: ADG 7 specifies a Limited Quantity value of 1 kg for this class of product.

Dangerous Goods Class: Class 5.1: Oxidising Agents, Sub Class 8 Corrosive

Packaging Group: II

Packaging Method: P002, IBC08

Class 5.1 Oxidising Agents shall not be loaded in the same vehicle or packed in the same freight container with Classes 1 (Explosives), 2.1 (Flammable Gases), 2.3 (Toxic Gases), 3 (Flammable Liquids), 4.1 (Flammable Solids), 4.2 (Spontaneously Combustible Substances), 4.3 (Dangerous When Wet Substances), 5.2 (Organic Peroxides), 6 (Toxic Substances, where the Toxic Substance is a fire risk substance), 7 (Radioactive Substances), 8 (Corrosive Substances), 9 (Miscellaneous Dangerous Goods, where the substance is a fire risk substance), Fire risk substances other than Dangerous Goods. They may however be loaded in the same vehicle or packed in the same freight container with Classes 2.2 (Non-Flammable, Non-Toxic Gases), 6 (Toxic Substances except where the substances are fire risk substances), 9 (Miscellaneous Dangerous Goods except where the goods are fire risk substances) Foodstuffs and foodstuff empties.

Section 15 - Regulatory Information

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations.

Section 16 - Other Information

This SDS contains only safety-related information. For other data see product literature.

Acronyms:

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail (7 th edition)
AICS	Australian Inventory of Chemical Substances
SWA	Safe Work Australia, formerly ASCC and NOHSC
CAS number	Chemical Abstracts Service Registry Number
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
IARC	International Agency for Research on Cancer
NOS	Not otherwise specified
NTP	National Toxicology Program (USA)
R-Phrase	Risk Phrase
SUSMP	Standard for the Uniform Scheduling of Medicines & Poisons
UN Number	United Nations Number

THIS SDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS. OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

This SDS is prepared in accord with the SWA document "Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice" (December 2011)