HASA HI-TEMP SPA BROMINE RESERVE

Safety Data Sheet

Emergency 24 Hour Telephone: **CHEMTREC 800.424.9300**

Corporate Headquarters: Hasa Inc.
P. O. Box 802736
Santa Clarita, CA 91355
Telephone • 661.259.5848
Fax • 661.259.1538

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION			
1.1	**Product Identification:**		
	1.1.1	**Product Name:**	Hasa Hi-Temp Spa Bromine Reserve
	1.1.2	**CAS # (**Chemical Abstracts Service Registry Number)**:**	7647-15-6
	1.1.3	**EINECS** (European Inventory of Existing Commercial Substances):	231-599-9
	1.1.4	**RTECS** (Registry of Toxic Effects of Chemical Substances):	VZ3150000
	1.1.5	**Synonym:**	Bromide salt of sodium; natrium bromide.
	1.1.6	**Chemical Name:**	Sodium Bromide
	1.1.7	**Chemical Formula:**	NaBr
	1.1.8	**Molecular Weight:**	102.9 g/mole
	1.1.9	**Chemical Family:**	Inorganic bromide salt of sodium.
1.2	**Recommended Uses:**		This product is formulated to establish a reserve of bromine in spas, hot tubs or swimming pools.
1.3	**Company Identification:**		Hasa Inc. P.O. Box 802736 Santa Clarita, CA 91355
1.4	**Emergency Telephone Number:**		**CHEMTREC (24 Hour):** 1-800-424-9300
1.5	**Non-Emergency Assistance:**		661-259-5848 (8 AM – 5 PM PST / PDT)

SECTION 2: HAZARD(S) IDENTIFICATION

Hazard Category	Acute Toxicity (Oral): Acute Toxicity (Inhalation): Skin Corrosion / Irritation: Eye Damage / Irritation:	Category 4 Category 4 Category 2 Category 2A
Symbol		
Signal Word	**WARNING**	
Hazard Statements	Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. Harmful if inhaled.	
Precautionary Statements	**Prevention**	
	Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear eye protection/face protection. Wear protective gloves. Avoid breathing dust. Use only outdoors or in a well-ventilated area.	
	Response	
	IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention. **IF ON SKIN:** Wash with plenty of soap and water. If skin irritation occurs, get medical attention. Take off contaminated clothing and wash before reuse. **IF INHALED:** Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.	
	Disposal	
	Dispose of container/contents in accordance with local, regional, national, international regulations as specified.	

SECTION 3: COMPOSITION INFORMATION ON INGREDIENTS

Ingredient	CAS No.	Approx. Wt.%
Sodium Bromide	7647-15-6	99%

SECTION 4: FIRST AID MEASURES

4.1	**IF IN EYES**	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
4.2	**IF ON SKIN OR CLOTHING**	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
4.3	**IF INHALED**	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
4.4	**IF SWALLOWED**	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

NOTE TO PHYSICIAN

Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5: FIRE FIGHTING MEASURES

5.1	**Extinguishing Media:**	Material is not combustible. Use extinguishing media appropriate to surrounding fire conditions..
5.2	**Products of Combustion:**	Decomposes at 800° C, with the release of toxic, irritant bromine fumes; hydrogen bromide, and sodium oxide.
5.3	**Fire Hazards in Presence of Various Substances:**	Not applicable.
5.4	**Special Fire-fighting Procedures:**	Use water spray to cool containers exposed to fire. Minimize exposure. Do Not breathe fumes. Contain run-off. In closed spaces, don self-contained breathing apparatus in positive pressure mode.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Steps To Be Taken In Case Material Is Spilled Or Released:
Wear respirator, chemical safety goggles, rubber gloves and boots. Sweep up, place in a bag and hold for waste disposal or possible re-use. Ventilate area and wash spill site after material pickup is complete.

SECTION 7: HANDLING AND STORAGE		
7.1	**Handling:**	Do not breathe dust. Do not get in eyes, on skin, or on clothing.
7.2	**Storage:**	Store in a cool, dry and well-ventilated area away from incompatible materials. Keep in securely fastened containers.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION			
8.1	**Engineering Controls:**		Use in a well-ventilated area.
8.2	**Personal Protection:**		
	8.2.1	**Eyes:**	Chemical safety goggles.
	8.2.2	**Respiratory:**	Dust respirator.
	8.2.3	**Skin & Body:**	Body covering clothes & boots.
	8.2.4	**Hands:**	Protective rubber gloves.
8.3	**Exposure Limits - EPA Guideline:**		
	8.3.1	**Dietary:**	Dietary exposure to sodium bromide is not expected to occur as a result of pesticidal uses on food since no currently registered products involve food and animal feed uses.
	8.3.2	**Occupational & Residential:**	The potential exposure for loader/mixer/applicator exists primarily from handling the liquid formulation of sodium bromide. This exposure is considered as minimal or low by EPA. No human toxicity concerns exist.
8.4	**Exposure Limits - OSHA Guidelines:** Federal guidelines treat the ingredient(s) in this product as a nuisance dust, as no product-specific guidelines have been issued for exposure. As with all nuisance dusts, worker breathing zone concentrations should be measured by validated sampling and analytical methods.		
	15.2.1	**OSHA PNOR** (Particulates Not Otherwise Regulated):	OSHA (PEL / TWA): ▪ 15 mg/m³ (total dust) ▪ 5 mg/m³ (respirable fraction)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES		
9.1	**Appearance:**	White crystalline solid.
9.2	**Odor:**	Odorless.
9.3	**Odor Threshold:**	Odorless.
9.4	**pH** (46% aqueous solution)**:**	7 (*Sodium bromide is a neutral salt*).
9.5	**Melting Point:**	755ºC (1391ºF)
9.6	**Freezing point:**	No information available.
9.7	**Boiling Point & Boiling Range:**	1390ºC
9.8	**Flash Point:**	No information available.
9.9	**Evaporation Rate:**	No information available.
9.10	**Flammability (solid, gas):**	Not flammable.
9.11	**Upper / Lower Flammability or Explosive Limits:**	No information available.
9.12	**Vapor Pressure:**	1 mm Hg @ 806ºC
9.13	**Vapor Density:**	Not applicable
9.14	**Relative Density (Specific Gravity):**	3.203
9.15	**Solubility** (@ 25ºC)**:**	94.6 g/100 g water 7 g/100g 95% ethanol 14.8 g/100 g methanol
9.16	**Partition Coefficient: (n-octanol / water):**	No information available.
9.17	**Auto-ignition Temperature:**	No information available.
9.18	**Decomposition Temperature:**	Decomposes at 800ºC.
9.19	**Molecular Weight:**	102.9 g/mole
9.20	**Viscosity:**	No information available.

SECTION 10: STABILITY AND REACTIVITY		
10.1	**Stability:**	Stable under normal use and storage conditions
10.2	**Instability Temperature:**	Avoid temperatures above 800ºC
10.3	**Conditions of Instability:**	Incompatible materials, moisture.
10.4	**Incompatibility:**	Strong acids, strong oxidants, heavy metal salts; reacts explosively with bromine trifluoride.
10.5	**Corrosivity:**	Not corrosive in presence of glass.
10.6	**Special Remarks on Reactivity:**	None
10.7	**Special Remarks on Corrosivity:**	None
10.8	**Polymerization:**	Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1	**Routes of Entry:**		Skin & Eye contact, inhalation. Ingestion unlikely.
11.2	**Acute Toxicity:**		
	11.2.1	**Acute Oral Toxicity** (LD_{50})**:**	4200 mg/kg (rat) - (EPA Toxicity category III)
	11.2.2	**Acute Dermal Toxicity** (LD_{50})**:**	> 2000 mg/kg (rabbit) - (EPA Toxicity category III).
	11.2.3	**Eye Irritation:**	Mild - (EPA Toxicity category IV)
	11.2.4	**Inhalation:**	Lack of potential inhalation exposure to humans.
	11.2.5	**Dermal Irritation:**	Mild - (EPA Toxicity category IV)
	11.2.6	**Dermal Sensitizer:**	Not a sensitizer (guinea pig).
11.3	**Chronic Toxicity:**		Repeated skin contact may cause dermatitis. Repeated oral intake of bromides (>9 mg/kg body weight/day) may affect the central nervous system. Warning symptoms include mental dullness, slurred speech, weakened memory, apathy, anorexia, constipation, drowsiness, and loss of sensitivity to touch and pain.
11.4	**Overexposure Effects on Humans:**		
	11.4.1	**Ocular:**	Mild Irritant
	11.4.2	**Dermal:**	Not irritant to intact skin. Slightly irritant on prolonged contact to abraded skin.
	11.4.3	**Inhalation:**	Irritant to upper respiratory tract.
	11.4.4	**Ingestion:**	Abdominal pain, nausea and vomiting. May cause falling asleep, muscular incoordination and respiratory depression.
11.5	**Target Organ Toxicity:** Reproductive and Development Toxicity		Sodium bromide has been shown to cause embryo-fetal toxicity and malformations in rats at dose levels, which also produce maternal toxicity. The No-Observed Effect Level (NOEL) is 100 mg/kg/day, and the Acceptable Daily Intake (ADI) for sodium bromide from food and drinking water in humans is 1 mg/kg/day. Comparable high doses of sodium chloride (table salt) similarly cause malformations, embryo-fetal toxicity, and maternal toxicity in mice.
11.6	**Mutagenicity:**		Not inducing DNA repair in cultured human epithelioid cells. Not clastogenic in human lymphocytcs metaphase analysis. Not mutagenic by the Ames test.
11.7	**Carcinogenicity [Cancer Potential]:**		
	11.7.1	**NTP** (National Toxicological Program 6th Annual Report on Carcinogens):	Not Listed.
	11.7.2	**IARC** (International Agency for Research on Cancer Monographs, V. 1-100):	Not Listed.
	11.7.3	**Proposition 65, California only:** (Safe Drinking Water and Toxic Enforcement Act of 1986)**:**	Not Listed.

SECTION 12: ECOLOGICAL INFORMATION

12.1	**Ecotoxicity:**		
	12.1.1	**Fish (LC_{50})**	Rainbow Trout (96-hour LC_{50}) - >1000 mg/l Bluegill sunfish (96-hour LC_{50}) - >1000 mg/l
	12.1.2	**Invertebrate (LC_{50})**	Daphnia Magma (48-hour LC_{50}) - > 1000 mg/l
	12.1.3	**Avian (LD_{50})**	Bobwhite quail (acute oral LD_{50}) - >2250 mg/kg Bobwhite quail (dietary LC_{50}) - >5633 ppm Mallard duck (dietary LC_{50}) - >5633 ppm
12.2	**Environmental Fate:**		Sodium bromide per se is a stable salt with no pesticidal activity. The salt dissociates in water to sodium and bromide ions which do not undergo any further degradation.
12.3	**Environmental Hazards** (PR Notice 93-10)		This product is toxic to fish and aquatic organisms. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water board or Regional Office of the EPA.
12.4	**Bioaccumulation:**		Bioaccumulation is not likely to occur since this material is highly soluble in water.
12.5	**Biodegradation:**		Sodium bromide is an inorganic salt, which fully dissociates in aquatic environment to bromide and sodium ions. It also undergoes degradation in soil to bromide ion (no further degradation or biodegradation will occur).

SECTION 13: DISPOSAL CONSIDERATIONS

Add into a large vessel containing water and drain into sewer with ample water. Avoid access to streams, lakes or ponds. Observe all federal, state and local environmental regulations when disposing of this material.

SECTION 14: TRANSPORT INFORMATION

14.1	**U.S. DOT Classification:**	Not regulated.
14.2	**FMCSA:** (Federal Motor Carrier Safety Administration)	Not Listed (Appendix A, 49 CFR Part 355).

SECTION 15: REGULATORY INFORMATION

15.1	**U.S. Regulations:**		
	15.1.1	**OSHA HAZCOM** (Hazard Communication)	This product is considered non-hazardous under the HAZCOM Standard (29 CFR 1910.1200).
	15.1.2	**OSHA PSM** (Process Safety Management)	Not regulated under PSM Standard (29 CFR 1910.119).
	15.1.3	**EPA FIFRA** (Federal Insecticide, Fungicide and Rodenticide Act)	Not regulated.
	15.1.4	**EPA EPCRA** (Emergency Planning and Community Right-to-Know Act)	Not regulated.
	15.1.5	**EPA TSCA** (Toxic Substance Control Act)	Listed on the inventory.
	15.1.6	**EPA RCRA** (Resource Conservation and Recovery Act)	This material does not meet RCRA's characteristic definition of ignitability, corrosivity, or reactivity, and is not listed in 40 CFR 261.33. The toxicity characteristic however, has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP).
	15.1.7	**EPA RMP** (Risk Management Plan)	Not regulated. (40 CFR 68.130)
15.2	**State of California Regulations:**		
	15.2.1	**Prop 65** (Safe Drinking Water and Toxic Enforcement Act of 1986)**:**	Not Listed
	15.2.2	**CalARP** (California Accidental Release Prevention)**:**	Not regulated.
	15.2.3	**CDPR** (California Department of Pesticide Regulation):	Reg. #: 10897-50030-AA
15.3	**Canada Regulations:**		
	15.3.1	**WHMIS** (Workplace Hazardous Materials Information System)**:**	Not Controlled.
	15.3.2	**DSL** (Domestic Substances List)	The substance is specified on the public portion of the DSL.

SECTION 16: OTHER INFORMATION

16.1	**HMIS III** (Hazardous Materials Identification System):			
	16.1.1	**HEALTH:**	**2**	
	16.1.2	**FLAMMABILITY:**	**0**	
	16.1.3	**PHYSICAL HAZARD:**	**0**	
	16.1.4	**Personal Protection:**	See Section 8	
16.2	**NFPA 704** (National Fire Protection Association):			
	16.2.1	**Health:**	2	
	16.2.2	**Flammability:**	0	
	16.2.3	**Instability**:	0	
	16.2.4	**Special:**	None	
16.3	**International Fire Code/ International Building Code.**		Irritant.	
16.4	**ANSI** (American National Standards Institute):			
	16.4.1	**Hazardous Industrial Chemicals -** SDSs-Preparation:	Complies with **ANSI Z400.1 – 2004**.	
	16.4.2	**Hazardous Industrial Chemicals -** Precautionary Labeling:	Complies with **ANSI Z129.1 – 2006**.	

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