



# HASA ALGI-BAN

## Safety Data Sheet


**HASA ALGI-BAN**  
Safety Data Sheet (SDS No. 204)

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	<b>Product Identification:</b>	
1.1.1	<b>Product Name:</b>	Hasa Algi-Ban
1.1.2	<b>CAS #</b> (Chemical Abstracts Service Registry Number):	87-90-1
1.1.3	<b>RTECS</b> (Registry of Toxic Effects of Chemical Substances):	XZ1925000
1.1.4	<b>EINECS</b> (European Inventory of Existing Commercial Substances):	201-782-8
1.1.5	<b>Chemical Name:</b>	Trichloroisocyanuric Acid
1.1.6	<b>Chemical Formula:</b>	$C_3Cl_3N_3O_3$
1.1.7	<b>Synonym:</b>	Trichloro-s-triazinetriene; Trichlor, 1,3,5-trichloro-s-triazine-2,4,6-trione; TCCA.
1.1.8	<b>Chemical Family:</b>	Halogenated Triazines.
1.2	<b>Recommended Uses:</b>	Sanitizing agent for pool and spa water. Algaeicide.
1.3	<b>Company Identification:</b>	Hasa Inc. P. O. Box 802736 Santa Clarita, CA 91355
1.4	<b>Emergency Telephone:</b>	<b>CHEMTREC:</b> 1-800-424-9300 (24 hour)
1.5	<b>Non-Emergency Assistance:</b>	661-259-5848 (8 AM – 5 PM PST / PDT)

<b>SECTION 2: HAZARD(S) IDENTIFICATION</b>		
<b>HEALTH HAZARD</b>	Skin corrosion / irritation	Category 1
	Acute Toxicity - Inhalation	Category 2
	Acute Toxicity - Oral	Category 4
	Specific Target Organ Toxicity	Category 3
<b>PHYSICAL HAZARD</b>	Oxidizing Solids	Category 2
<b>ENVIRONMENTAL HAZARD</b>	Hazardous To Aquatic Environment – Acute Hazard	Category 1
	Hazardous To Aquatic Environment - Chronic Hazard	Category 1
<b>SYMBOLS</b>		
<b>SIGNAL WORD</b>	<b>DANGER</b>	
<b>HAZARD STATEMENT</b>	<p>Causes severe skin burns and eye damage.            Fatal if inhaled.            Harmful if swallowed.            May cause respiratory irritation.            May intensify fire, oxidizer.            Very toxic to aquatic life.            Very toxic to aquatic life with long lasting effects.</p>	
<b>PRECAUTIONARY STATEMENT</b>	<b>Prevention</b>	
	<p>Do not breathe dust/fume/gas/mist/vapor/spray. Use only outdoors or in a well-ventilated area. In case of inadequate ventilation, wear respiratory protection.            Wash face, hands and any exposed skin thoroughly after handling.            Wear protective gloves/protective clothing/eye protection/face protection.            Do not eat, drink or smoke when using this product.            Keep away from heat. Keep or store away from clothing or combustible materials. Take any precautions to avoid mixing with combustibles.            Avoid release to the environment.</p>	
	<b>Response</b>	
	<p>If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor.            If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.            If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.            If swallowed: Rinse mouth. Do NOT induce vomiting. Call a poison center or doctor if you feel unwell.            In case of fire, use large volumes of water to extinguish.            Collect spillage.</p>	
	<b>Storage and Disposal</b>	
<p>Store in a well-ventilated place. Keep container tightly closed. Store locked up.            Dispose of container/contents in accordance with local, regional, national, international regulations as specified.</p>		

**SECTION 3: COMPOSITION INFORMATION ON INGREDIENTS**

	<b>Ingredient</b>	<b>CAS No.</b>	<b>Approx. Wt.%</b>
3.1	Trichloroisocyanuric Acid	87-90-1	98.0 - 100.0%
3.2	Impurities	N/A	0 – 2.0%

**SECTION 4: FIRST AID MEASURES**

4.1.	<b>IF IN EYES</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
4.2.	<b>IF ON SKIN OR CLOTHING</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
4.3.	<b>IF INHALED</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
4.4.	<b>IF SWALLOWED</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>

**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	<b>Extinguishing Media:</b>	Flood with copious amounts of water. Do not use ABC fire extinguishers. Do not use dry chemicals, carbon dioxide, or halogenated extinguishing agents.
5.2	<b>Fire/Explosion Hazards:</b>	Negligible fire hazard. If heated by outside sources above 240°C (464°F) this product will undergo decomposition with the evolution of noxious gases but no visible flame. Wet materials may generate nitrogen trichloride (an explosion hazard).
5.3	<b>Fire Fighting Procedures:</b>	Consider evacuation of personnel located downwind. Keep unnecessary people away, isolate hazard area and deny entry. Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Wear NIOSH approved positive-pressure self-contained breathing apparatus operated in pressure demand mode. Material which appears undamaged except for being damp on the outside, should be opened and inspected immediately. DO NOT attempt to reseal contaminated drums. Damp material should be neutralized to a non-oxidizing state.
5.4	<b>Flammable Limits:</b>	No information available
5.5	<b>Products of Combustion:</b>	Chlorine, Nitrogen, Nitrogen trichloride, Cyanogen chloride, Oxides of carbon, Phosgene.
5.6	<b>Fire Hazards in Presence of Various Substances:</b>	Do not mix with other chemicals. Keep combustibles away from this product.
5.7	<b>Sensitivity to Impact or Static Discharge:</b>	Not sensitive.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

6.1	<b>Personal Precautions:</b>	Keep unnecessary and unprotected persons away. Isolate hazard area and deny entry. Do not get in eyes, on skin or on clothing. Do not breathe dust, fume, gas, mist, vapors, or spray. Wear appropriate personal protective equipment recommended in Section 8, Exposure Controls / Personal Protection, of the SDS. Keep away from combustible materials.
6.2	<b>Methods and Materials for Containment and Cleaning Up:</b>	DO NOT add water to spilled material. DO NOT use floor sweeping compounds to clean up spills. Sweep and scoop spilled material into clean, dedicated equipment. Every attempt should be made to avoid mixing spilled material with other chemicals or debris when cleaning up. DO NOT attempt to reseal contaminated drums. DO NOT transport wet or damp material. Damp material should be neutralized to a non-oxidizing state.
6.3	<b>Environmental Precautions:</b>	This material is very toxic to aquatic life. This material is very toxic to aquatic life with long lasting effects. Keep out of water supplies and sewers. Releases should be reported, if required, to appropriate agencies.

**SECTION 7: HANDLING AND STORAGE**

7.1	<b>Handling:</b>	Do not get in eyes, on skin, or on clothing. Avoid breathing vapors or dust when opening container. Avoid creation of dust. Wash thoroughly after handling. NEVER add water to this product. Always add product to large quantities of water. Use clean, dry utensils. Do not add the product to any dispensing device containing residuals of other products.
7.2	<b>Storage:</b>	Store and handle in accordance with all current regulations and standards. (NFPA Oxidizer Class 1). Do not allow water to get in container. If liner is present, tie after each use. Keep container tightly closed and properly labeled. Store containers on pallets. Keep away from food, drink and animal feed. Keep separated from incompatible substances (see Section 10 of the Safety Data Sheet). Product has an indefinite shelf life if stored in original container in a cool, dry place.

**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

8.1	<b>Engineering Controls:</b>	Use only in well-ventilated areas. Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.
8.2	<b>Personal Protection:</b>	
8.2.1	<b>Eyes and Face:</b>	Wear chemical safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
8.2.2	<b>Skin:</b>	Wear protective clothing to minimize skin contact. When potential for contact with dry material exists, wear disposable coveralls suitable for dust exposure, such as Tyvek®. Contaminated clothing should be removed and laundered before reuse.
8.2.3	<b>Respiratory:</b>	A NIOSH approved respirator with N95 (dust, fume, mist) cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. The added protection of a full face piece respirator is required when visible dusty conditions are encountered and eye irritation may occur. Acid gas cartridges with N95 filters are required when fumes or vapor may be generated. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.
8.2.4	<b>Protective Material Types:</b>	Butyl rubber, Natural rubber, Neoprene, Nitrile, Polyvinyl chloride (PVC), Tyvek®

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

9.1	<b>Physical State and Appearance:</b>	White granules.
9.2	<b>Odor:</b>	Slight odor of chlorine.
9.3	<b>Odor Threshold:</b>	Not reported.
9.4	<b>Molecular Weight:</b>	232.4 g/mole
9.5	<b>Boiling Point:</b>	Not applicable
9.6	<b>Melting Point:</b>	246.7°C (decomposes)
9.7	<b>Solubility in Water:</b>	0.98 mg/100 g @ 25°C
9.8	<b>pH:</b>	2.9 to 3.5 (1% aqueous solution)
9.9	<b>Bulk Density:</b>	63 - 66 lbs/ft <sup>3</sup> (loose)
9.10	<b>Vapor Density:</b>	Not applicable.
9.11	<b>Vapor Pressure:</b>	Very small, impossible to measure.
9.12	<b>Evaporation Rate:</b>	Not applicable.
9.13	<b>Flash point:</b>	> 250°C (482°F) open cup.
9.14	<b>Flammability:</b>	Not applicable.
9.15	<b>Flammable Limits:</b>	Not applicable.
9.16	<b>Percent Volatile:</b>	Not applicable.
9.17	<b>Auto Ignition Temperature:</b>	Not applicable.
9.18	<b>Partition Coefficient (N octanol / Water):</b>	Not applicable.
9.19	<b>Viscosity:</b>	Not applicable.

**SECTION 10: STABILITY AND REACTIVITY**

10.1	<b>Stability:</b>	Stable at normal temperatures and pressures.
10.2	<b>Conditions to Avoid:</b>	Do not package in paper or cardboard. Note: Contact with small amounts of water may result in an exothermic reaction with the liberation to toxic fumes.
10.3	<b>Polymerization:</b>	Will not occur.
10.4	<b>Incompatible Materials:</b>	Organic materials, reducing agents, nitrogen containing materials, other oxidizers, acids, bases, oils, grease, sawdust, dry fire extinguishers containing monoammonium compounds.
10.5	<b>Hazardous Decomposition Products:</b>	Nitrogen trichloride, chlorine, nitrous oxides, cyanogen chloride, carbon monoxide, carbon dioxide.

**SECTION 11: TOXICOLOGICAL INFORMATION**

11.1	<b>Routes of Entry:</b>	Eyes, skin, ingestion, dermal absorption.
11.2	<b>Acute Toxicity:</b>	
	11.2.1 <b>Eye Irritation (rabbit):</b>	Corrosive
	11.2.2 <b>Dermal Irritation (rabbit):</b>	Corrosive
	11.2.3 <b>Dermal LD<sub>50</sub> (rabbit):</b>	>2 g/kg
	11.2.4 <b>Oral LD<sub>50</sub> (rat):</b>	809 mg/kg
	11.2.5 <b>Inhalation LC<sub>50</sub> (rat):</b>	0.09 to 0.29 mg/L (4 hours)
11.3	<b>Target Organs:</b>	Kidneys, liver, respiratory systems, eyes, skin.
11.4	<b>Acute Effects from Overexposure:</b>	
	11.4.1 <b>Eye Contact:</b>	Eye exposures may cause burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to the internal contents of eye.
	11.4.2 <b>Skin Contact:</b>	Exposure to solid along with moisture may cause redness, irritation, burning sensation, swelling, blister formation, first, second, or third degree burns. Dry material is less irritating than wet material. This material is not a skin sensitizer based on studies with guinea pigs.
	11.4.3 <b>Inhalation:</b>	This material in the form as sold is not expected to produce respiratory effects. Particles of respirable size are generally not encountered. The respirable fraction is typically less than 0.1% by weight for the granular and extra granular grades. If ground or otherwise in a powdered form, effects similar to a corrosive substance may occur. Exposure to the solid product or to free chlorine evolving from the product may cause irritation, redness of upper and lower airways, coughing, laryngeospasm and edema, shortness of breath, bronchoconstriction, and possible pulmonary edema. The pulmonary edema may develop several hours after a severe acute exposure.
	11.4.4 <b>Ingestion</b>	Exposure by ingestion may cause irritation, nausea, and vomiting. May cause local tissue damage to epiglottis, mucus membranes of the mouth, esophagus and stomach such as burning, inflammation, local ulceration, and may cause gastrointestinal bleeding.
11.5	<b>Chronic Effects from Overexposure:</b>	Prolonged exposure may cause damage to the respiratory system. Chronic inhalation exposure may cause impairment of lung function and permanent lung damage.
11.6	<b>Carcinogenic [Cancer Potential] Information:</b>	
	11.6.1 <b>NTP</b> (National Toxicological Program 6 <sup>th</sup> Annual Report on Carcinogens):	Not Listed.
	11.6.2 <b>IARC</b> (International Agency for Research on Cancer Monographs, V. 1-100):	Not Listed.
	11.6.3 <b>OSHA:</b>	Not Listed.

**SECTION 12: ECOLOGICAL INFORMATION**

12.1	<b>Ecotoxicological Information:</b> <b>(PR Notice 93-10)</b>	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.
12.2	<b>Aquatic Organisms:</b>	
12.2.1	<b>Fish (LC<sub>50</sub>)</b>	0.23-0.40 mg/L blue gill sunfish (96 hour) 0.24-0.37 mg/L rainbow trout (96 hour)
12.2.2	<b>Invertebrate (LC<sub>50</sub>)</b>	0.19 mg/L daphnia magna (48 hour).
12.2.3	<b>Marine Organism (LC<sub>50</sub>)</b>	0.09 mg/L shrimp (96 hour)
12.2.4	<b>Avian (LD<sub>50</sub>)</b>	1890 mg/kg mallard duck (oral) 1674 mg/kg Bobwhite Quail (oral)
12.3	<b>Chemical Fate:</b>	No information found

**SECTION 13: DISPOSAL CONSIDERATIONS**

13.1	<b>Waste from material:</b>	Use or reuse if possible. This material is a registered pesticide. May be subject to disposal regulations. Dispose in accordance with all applicable regulations. Do not put product, spilled product, or filled or partially filled containers into the trash or waste compactor. DO NOT transport wet or damp material. Damp material should be neutralized to a non-oxidizing state.
13.2	<b>Container Management:</b>	See product label for container disposal information. Dispose of container in accordance with applicable local, regional, national, and/or international regulations. Container rinsate must be disposed of in compliance with applicable regulations.



**SECTION 14: TRANSPORT INFORMATION**

14.1	<b>US D.O.T.</b>		
		<b>Inside packages up to 2.2 pounds.</b>	<b>Inside or individual packages over 2.2 pounds.</b>
14.1.1	<b>Proper Shipping Name:</b>	Consumer Commodity	Trichloroisocyanuric Acid. Dry
14.1.2	<b>Hazard Class / Division:</b>	ORM-D	5.1
14.1.3	<b>UN ID Number:</b>	Not applicable	UN2468
14.1.4	<b>Labels:</b>	ORM-D	Oxidizer 5.1
14.1.5	<b>Placards:</b>	None required	Oxidizer 5.1
14.1.6	<b>Markings:</b>	None required	Oxidizer 5.1
14.1.7	<b>Packing Group:</b>	None required	II
14.2	<p><b>“Materials of Trade” Exceptions.</b>            Certain hazardous materials transported in small quantities as part of a business are subject to less regulation, because of the limited hazard they pose. These materials are known as Materials of Trade. The regulations that apply to MOTs are found in 49 CFR § 173.6.</p>		
14.3	<b>Canadian TDG</b> (Transportation of Dangerous Goods)		
14.3.1	<b>Shipping Name:</b>	Trichloroisocyanuric acid, dry	
14.3.2	<b>UN ID Number:</b>	UN2468	
14.3.3	<b>Hazard Class:</b>	5.1	
14.3.4	<b>Packing Group:</b>	II	

**SECTION 15: REGULATORY INFORMATION**

<b>15.1</b>	<b>U.S. Regulations:</b>	
15.1.1	<b>OSHA HAZCOM</b> (Hazard Communication)	This material is considered hazardous by the HAZCOM Standard (29 CFR 1910.1200)
15.1.2	<b>OSHA PSM</b> (Process Safety Management)	Not regulated under PSM Standard (29 CFR 1910.119)
15.1.3	<b>EPA FIFRA</b> (Federal Insecticide, Fungicide and Rodenticide Act)	EPA Reg. No. :10897-2 (Registered pesticide under 40 CFR 152.10)
15.1.4	<b>EPA EPCRA</b> (Emergency Planning and Community Right-to-Know Act)	Section 302 – TPQ: not listed. Section 304 - RQ: not listed. Section 313 – not on TRI list.
15.1.5	<b>EPA SARA</b> (Superfund Amendments and Reauthorization Act) <b>Title III</b>	<b>Section 311/312</b> Acute: Yes Chronic: No Fire: Yes Reactive: Yes Sudden Release: No
15.1.6	<b>EPA TSCA</b> (Toxic Substance Control Act)	All components are listed or exempted. TSCA 12(b): This product is not subject to export notification.
15.1.7	<b>EPA CERCLA</b> (Comprehensive Environmental Response, Compensation, and Liability Act)	<b>102a/103</b> Not regulated
15.1.8	<b>EPA RMP</b> (Risk Management Plan)	Not listed. (40 CFR 68.130)
15.1.9	<b>EPA RCRA</b> (Resource Conservation and Recovery Act)	If this product becomes a waste, it meets the criteria of a hazardous waste as defined in 40 CFR 261 and would have the EPA hazardous waster number: D001.
15.1.10	<b>FHSA</b> (Federal Hazardous Substances Act)	Complies.
<b>15.2</b>	<b>State of California Regulations:</b>	
15.2.1	<b>CDPR</b> (California Department of Pesticide Regulation)	Reg. No.10897-2-ZA
15.2.2	<b>CalARP</b> (California Accidental Release Prevention Program)	Not listed.
<b>15.3</b>	<b>Canada Regulations:</b>	
15.3.1	<b>WHMIS</b> (Workplace Hazardous Materials Information System) <b>Classification</b>	C - Oxidizing material D1B - Poisonous and infectious material - Immediate and serious effects – Toxic D2B - Poisonous and infectious material - Other effects - Toxic
15.3.2	<b>WHMIS</b> Health Effects Criteria Met by this Chemical	D1B - Acute lethality - toxic – immediate D2B - Skin irritation - toxic – other D2B - Eye irritation - toxic - other
15.3.3	<b>WHMIS</b> Ingredient Disclosure List	Included for disclosure at 1% or greater.
15.3.4	<b>DSL</b> (Domestic Substances List)	All components of this product are on the DSL.

<b>SECTION 16: OTHER INFORMATION</b>			
16.1	<b>HMIS III</b> (Hazardous Materials Identification System):		
	16.1.1	<b>HEALTH</b>	<b>3</b>
	16.1.2	<b>FLAMMABILITY</b>	<b>0</b>
	16.1.3	<b>PHYSICAL HAZARD</b>	<b>2</b>
	16.1.4	<b>PERSONAL PROTECTION</b>	Section 8
16.2	<b>NFPA 704</b> (National Fire Protection Association):		
	16.2.1	<b>HEALTH</b>	<b>2</b>
	16.2.2	<b>FLAMMABILITY</b>	<b>0</b>
	16.2.3	<b>INSTABILITY</b>	<b>2</b>
	16.2.4	<b>SPECIAL</b>	<b>OX</b>
	16.2.5	<b>NFPA Classification</b>	Class 1 Oxidizer
16.3	<b>ANSI</b> (American National Standards Institute):		
	16.3.1	<b>Hazardous Industrial Chemicals - MSDS-Preparation:</b>	Complies with <b>ANSI Z400.1 – 2004.</b>
	16.3.2	<b>Hazardous Industrial Chemicals - Precautionary Labeling:</b>	Complies with <b>ANSI Z129.1 – 2006.</b>



**Note: The information contained herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge and belief. NO WARRANTY OR GUARANTEE, express or implied, is made regarding the product performance, product stability, or as to any other condition of use, handling, transportation, and storage. Customer use, handling, transportation, and storage may involve additional safety and/or performance considerations. Our technical personnel will be happy to respond to questions regarding safe handling, storage, transportation, and use procedures. The safe handling, storage, transportation, and use procedures remain the sole responsibility of the customer. No suggestions for handling, storage, transportation, or use are intended as or to be construed as recommendations which may infringe on any existing patents or violate any Federal, State, and/or local law and/or regulation, ordinance, standard, etc. This Safety Data Sheet has been prepared by HASA, Inc. staff from test reports and other information available in the public domain.**