

# MATERIAL SAFETY DATA SHEET



NFPA	HMIS	PPE	Symbol(s)
			<p><b>CORROSIVE</b> 8 Regulated</p>
Current Issue Date: September 21, 2011		Revision Number: 0	
<b>1. PRODUCT AND COMPANY IDENTIFICATION</b>			
Product Name:	Clar+Ion A7		
Other/Generic Names:	Aluminum Sulfate Mixture		
Recommended Use:	Water Purification		
Manufacturer:	General Chemical, LLC 90 East Halsey Road Parsippany, NJ 07054		
	General Chemical Performance Products Ltd. 90 East Halsey Road Parsippany, NJ 07054		
For More Information:	Customer Service US ONLY: 800-631-8050 (Monday – Friday 9:00AM – 4:30PM)		
	Customer Service CANADA ONLY: 866-543-3896 (Monday – Friday 9:00AM – 4:30PM)		
Emergency Telephone Number:	US ONLY - CALL CHEMTREC: 800-424-9300 (24 Hours/Day, 7 Days/Week) CANADA ONLY - CALL CANUTEC: 613-996-6666 (24 Hours/Day, 7 Days/Week)		
<b>2. HAZARDS IDENTIFICATION</b>			
<b>EMERGENCY OVERVIEW:</b> A clear, light green or amber liquid with a negligible degree of odor. Can irritate the skin and eyes. May be harmful if swallowed. Not flammable, but may release toxic vapors if decomposed in a fire.			
<b>OSHA Status:</b>	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)		
<b>Potential Health Affects</b>			
<b>Skin:</b>	May cause skin irritation.		
<b>Eyes:</b>	May strongly irritate or burn the eyes.		
<b>Inhalation:</b>	Can cause irritation of respiratory tract.		
<b>Ingestion:</b>	May irritate the gastrointestinal tract. Concentrated solutions may cause burns to the digestive tract.		
<b>Delayed Effects:</b>	None known.		
<b>3. COMPOSITION/INFORMATION ON INGREDIENTS</b>			
Component	CAS No	Weight %	
Aluminum Sulfate	10043-01-3	20-25	
Sulfuric Acid	7664-93-9	6-8	
Water	7732-18-5	Balance	

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<b>4. FIRRST AID MEASURES</b>	
<b>Eye Contact</b>	Immediately flush eyes with water for at least 15 minutes. Get medical attention if irritation persists.
<b>Skin Contact</b>	Flush with plenty of water, removing contaminated clothing. If irritation develops, get medical attention.
<b>Inhalation</b>	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get prompt medical attention.
<b>Ingestion</b>	Do not induce vomiting. Immediately give large quantities of water. Get medical attention immediately.
<b>Notes to Physician</b>	Treat symptomatically
<b>5. FIRE-FIGHTING MEASAURES</b>	
<b><u>Flammable Properties</u></b>	
<b>FLASH POINT:</b>	Not Flammable
<b>FLASH POINT METHOD:</b>	Not Applicable
<b>AUTOIGNITION TEMPERATURE:</b>	Not Applicable
<b>UPPER FLAME LIMIT (VOLUME % IN AIR):</b>	Not Applicable
<b>LOWER FLAME LIMIT (VOLUME % IN AIR):</b>	Not Applicable
<b>FLAME PROPAGATION RATE (SOLIDS):</b>	Not Applicable
<b>OSHA FLAMMABILITY CLASS:</b>	Not Applicable
<b>SUITABLE EXTINGUISHING MEDIA:</b>	Water spray, foam, carbon dioxide or dry chemical
<b>UNSUITABLE EXTINGUISHING MEDIA:</b>	No information available
<b><u>Explosion Limits</u></b>	
<b>Hazardous Combustion Products</b>	No information available
<b>Impact sensitivity</b>	No information available
<b>Sensitivity to static discharge</b>	No information available
<b>Specific Hazards Arising from the Chemical</b>	None
<b>Protective Equipment and Precautions for Firefighters</b>	Wear self-contained breathing apparatus (SCBA) and full protective equipment. Use water spray to keep containers cool.
<b>6. ACCIDENTAL RELEASE MEASURES</b>	
<b>IN CASE OF SPILL OR OTHER RELEASE</b>	Dilute small spills or leaks cautiously with pelnty of water. Contain large spills with clay or other inert materials. If permitted by regulation, neutralize with alkali. Carbon dioxide may evolve if neutralized with carbonates (e.g. soda ash). Collect liquid and/or residue and dispose of in accordance with applicable regulations.
<b>7. HANDLING AND STORAGE</b>	
<b>Handling</b>	Keep container tightly closed when not in use. Avoid contact with skin, eyes, and clothing. Avoid breathing vapors or mists. Remove contaminated clothing and wash thoroughly after handling.
<b>Storage</b>	Keep storage container tightly closed. Store in a cool, dry, well-ventilated area or cabinet. Isolate from incompatible substances. Store and ship in plastic or rubber-lined containers.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION					
Component	ACGIH TLV	OSHA PEL	Ontario TWAEV	Mexico OEL (TWA)	NIOSH IDLH
Aluminum sulfate 10043-01-3	TWA: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>		TWA: 2 mg/m <sup>3</sup>	
Sulfuric Acid 7664-93-9	TWA: 0.2 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	TWA: 0.2 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>
<b>Engineering Measures</b> Use local exhaust to keep airborne concentrations below the permissible exposure limits.					
<b>Personal Protective Equipment</b>					
<b>Eye/Face Protection</b>	Wear chemical safety goggles. Do not wear contact lenses.				
<b>Skin Protection</b>	Wear appropriate personal protective clothing to prevent skin contact. If prolonged or repeated contact is anticipated, all clothing should be impervious to liquid.				
<b>Respiratory Protection</b>	A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.				
<b>General Hygiene Considerations</b>	To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR 1910.132) be conducted before using this product. Eyewash and safety showers are recommended.				
9. PHYSICAL AND CHEMICAL PROPERTIES					
<b>Appearance</b>	Clear, light green or amber liquid				
<b>Color</b>	Clear, light green or amber				
<b>Chemical Formula</b>	Mixture				
<b>Odor</b>	Very slight to none				
<b>Odor Threshold</b>	No information available				
<b>Physical State</b>	Liquid				
<b>pH</b>	<1				
<b>Flash Point</b>	Not flammable				
<b>Autoignition Temperature</b>	Not applicable				
<b>Boiling Point/Range</b>	101 °C / 214 °F				
<b>Melting Point/Range</b>	-18°C / 0 °F				
<b>Flammability Limits in Air</b>	No information available				
<b>Explosive Properties</b>	No information available				
<b>Oxidizing Properties</b>	No information available				
<b>Evaporation Rate</b>	Not determined				
<b>Vapor Pressure</b>	Not applicable				
<b>Vapor Density</b>	Not applicable				
<b>Specific Gravity</b>	1.27-1.29				
<b>Partition Coefficient (n-octano/water)</b>	No information available				
<b>Viscosity</b>	No information available				
<b>Molecular Weight</b>	Mixture				
<b>Water Solubility</b>	100%				
<b>VOC Content (%)</b>	~60				

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<b>10. STABILITY AND REACTIVITY</b>					
<b>Chemical Stability</b>	Normally stable. If evaporated to dryness, residue should not be exposed to elevated temperatures, as this will yield toxic and corrosive gases.				
<b>Incompatible Products</b>	Contact with alkalis and water reactive materials may cause exothermic reactions. Do not store with alloys containing aluminum, magnesium, zinc, and copper.				
<b>Hazardous Decomposition Products</b>	At elevated temperatures, sulfur oxides, CO and CO <sub>2</sub> may be formed. These are toxic and corrosive and are oxidizers. Sulfur trioxide is also a fire hazard. The loss of these gases leaves a caustic residue.				
<b>Possibility of Hazardous Reactions</b>	Will not occur.				
<b>11. TOXICOLOGICAL INFORMATION</b>					
<b><u>Acute Toxicity</u></b>					
<b><u>Component Information</u></b>					
<b>Component</b>	<b>LD50 Oral</b>	<b>LD50 Dermal</b>			<b>LC50 Inhalation</b>
Aluminum sulfate	1930 mg/kg (rat) 6207 mg/kg (mouse)				
Sulfuric Acid	2140 mg/kg (rat)				320 mg/m <sup>3</sup> / 2 hr (rat) 510 mg/m <sup>3</sup> / 2 hr (mouse)
<b>Irritation</b>	No information available				
<b>Corrosivity</b>	No information available				
<b>Sensitization</b>	No information available				
<b><u>Chronic Toxicity</u></b>					
<b>Carcinogenicity</b>	This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group 1), potentially carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B)				
<b>Component</b>	<b>ACGIH</b>	<b>IARC</b>	<b>NTP</b>	<b>OSHA</b>	<b>Mexico</b>
Sulfuric Acid	A2	Group 1	Known	X	A2
<b>Mutagenic Effects</b>	No information available				
<b>Reproductive Effects</b>	No information available				
<b>Developmental Effects</b>	No information available				
<b>Teratogenicity</b>	No information available				
<b>Target Organ Effects</b>	No information available				
<b>Other Adverse Effects</b>	DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS: IARC and NTP have classified "strong inorganic acid mists containing sulfuric acid" as known as human carcinogens. No definitive causal relationship between sulfuric acid mist exposure and respiratory cancer has been shown.				
<b>Endocrine Disruptor Information</b>	No information available				


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12. ECOLOGICAL INFORMATION				
<b>Ecotoxicity</b>				
Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.				
Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Aluminum sulfate		LC50 = 100 mg/L Carassius auratus 96 h LC50 = 37 mg/L Gambusia affinis 96 h		EC50 = 136 mg/L 15 min
Sulfuric acid		LC50>500 mg/L Brachydanio rerio 96 h		EC50 = 29 mg/L 24 h
<b>Persistence and Degradability</b>		No information available		
<b>Bioaccumulation</b>		No information available		
<b>Mobility in Environmental Media</b>		No information available		
<b>Other adverse affects</b>		<p><b>Aluminum sulfate component:</b> 14 ppm/36 hr/fundulus/fatal/fresh water; 240 ppm/48 hr/mosquito fish/TLm/water type not specified; TLm Mosquito fish, 235 ppm, 96 hours; LC50 Largemouth bass, 250 ppm, 96 hours</p> <p><b>Sulfuric acid component:</b> 24.5 ppm 24 hr/ bluegill/lethal/fresh water; 42.5 ppm/48 hr/prawn/LC50/salt water</p>		
13. DISPOSAL CONSIDERATIONS				
<b>Waste Disposal Methods</b>	Dispose of waste in accordance with all federal, state, and local regulations.			
<b>Contaminated Packaging</b>	Empty containers should be taken for local recycling, recovery or waste disposal.			
14. TRANSPORT INFORMATION				
<b>DOT</b>	Regulated			
<b>Proper Shipping Name</b>	Corrosive liquid, acidic, inorganic, n.o.s. (contains sulfuric acid and aluminum sulfate)			
<b>Hazard Class</b>	8			
<b>UN-No</b>	UN3264			
<b>Packing Group</b>	PGII			
<b>TDG</b>	Regulated			
<b>Hazard Class</b>	8			
<b>UN-No</b>	UN3264			
<b>Packing Group</b>	PGII			

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15. REGULATORY INFORMATION					
<b><u>International Inventories</u></b>					
TSCA	Yes				
DSL	Yes				
ELINCS	No				
EINECS	Yes				
ENCS	Yes				
CHIINA	Yes				
KECL	Yes				
PICCS	Yes				
AICS	Yes				
<b><u>U.S. Federal Regulations</u></b>					
<b><u>SARA 313</u></b>					
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains the following chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:					
<b><u>Component</u></b>	<b><u>CAS-No</u></b>	<b><u>Weights %</u></b>	<b><u>SARA 313-Threshold Values</u></b>		
Aluminum sulfate					
Sulfuric acid	7664-93-9	6-8	1.0		
<b><u>SARA 311/312 Hazardous Categorization</u></b>					
<b>Chronic Health Hazard</b>	No				
<b>Acute Health Hazard</b>	Yes				
<b>Fire Hazard</b>	No				
<b>Sudden Release of Pressure Hazard</b>	No				
<b>Reactive Hazard</b>	No				
<b><u>Clean Water Act</u></b>					
<b><u>Component</u></b>	<b><u>CWA – Reportable Quantities</u></b>	<b><u>CWA – Toxic Pollutants</u></b>	<b><u>CWA – Priority Pollutants</u></b>	<b><u>CWA – Hazardous Substances</u></b>	
Aluminum sulfate	5000 lb			X	
Sulfuric acid	1000 lb			X	
<b><u>CERCLA</u></b>					
<b><u>Component</u></b>	<b><u>CERCLA RQ (lb)</u></b>	<b><u>SARA TPQ (lb)</u></b>			
Aluminum sulfate	5000 lb				
Sulfuric acid	1000 lb	1000 lb			
<b><u>U.S. State Regulations</u></b>					
<b><u>California Proposition 65</u></b>					
"Strong inorganic acid mists containing sulfuric acid" has been listed on California's Proposition 65 as a cancer-causing agent.					
<b><u>Component</u></b>	<b><u>CAS-No</u></b>	<b><u>California Prop. 65</u></b>			
Sulfuric acid	7664-93-9	Carcinogen			
<b><u>State Right-to-Know</u></b>					
<b><u>Component</u></b>	<b><u>Massachusetts</u></b>	<b><u>New Jersey</u></b>	<b><u>Pennsylvania</u></b>	<b><u>Illinois</u></b>	<b><u>Rhode Island</u></b>
Aluminum sulfate	X	X	X		
Sulfuric acid	X	X	X	X	X

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<b>Other International Regulations</b>	
Mexico	No information available
Canada	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.
<b>WHMIS Hazard Class</b>	
E Corrosive material	
D2A Very toxic materials	
D2B Toxic materials	
<b>16. OTHER INFORMATION</b>	
Current Issue Date:	September 21, 2011
Previous Issue Date:	
Revision Summary:	Convert to GC Template
<b>Disclaimer:</b> All information, statements, data, service and/or recommendations, including, without limitation, those relating to storage, loading/unloading, piping and transportation (collectively referred to herein as "information") are believed to be accurate and reliable. However, no representation or warranty, express or implied, is made as to its completeness, accuracy, fitness for a particular purpose or any other matter, including, without limitation, that the practice or application of any such information is free of patent infringement or other intellectual property misappropriation. General Chemical, LLC is not engaged in the business of providing technical, operational, engineering or safety information for a fee, and therefore; any such information provided herein has been furnished as an accommodation and without charge. All information provided herein is intended for use by persons having requisite knowledge, skill and experience in the chemical industry. General Chemical, LLC shall not be responsible or liable for the use, application or implementation of the information, provided herein, and all such information is to be used at the risk, and in the sole judgment and discretion, of such persons, their employees, advisors and agents.	
End of MSDS	