



Solve 80 U

Safety Data Sheet

Date Issued: 04/30/2015
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I. PRODUCT/COMPANY IDENTIFICATION

Product Name: **Solve 80 U**
Generic Name: Aluminum Chloride Hydroxide
Recommended use: Water treatment chemical
Chemical Type: Liquid
COMPANY: WaterSolve, LLC, 5031 68TH Street Caledonia, Michigan 49316, USA
For Product information call 616-575-8693
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

II. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state	Color	Appearance	Odor
Liquid	Clear to light gray	Slightly hazy	Negligible

GHS Label elements, including precautionary statements Signal Word: Warning



Hazard statements

Causes skin irritation and eye irritation.

Precautionary statements- Prevention

Do not breathe dust/fumes/gas/mist/vapors/spray.

Do not eat, drink or smoke when using this product.

Wash face, hands and any exposed skin thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection

Keep only in original container

Precautionary Statements-Response

If on skin (or hair): Wash with plenty of water. If skin irritation occurs: Get medical attention. Take off all contaminated clothing and wash before reuse.

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.

Precautionary Statements- Storage

Store in a secure area. Store in corrosive resistant plastic or FRP container or container with corrosive resistant inner liner.

Precautionary Statements – Disposal

Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable federal, state, and local regulations.

III. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Polyaluminum chloride, solution

Chemical name	CAS#	Weight %
Water	7732-18-5	40-70
Aluminum chloride Hydroxide	12042-91-0	30-60

IV. **FIRST AID MEASURES**

General Advice: After first aid, get appropriate in-plant, paramedic, or community medical support.

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get immediate medical attention if irritation occurs.

Skin Contact: Wash off immediately with plenty of water. Take off contaminated clothing. Wash contaminated clothing before reuse. Get medical attention if irritation occurs.

Inhalation: (mist or spray) Remove from exposure, seek medical treatment if any symptoms occurs. Oxygen or artificial respiration if needed.

Ingestion: Give large amounts of water to drink. If vomiting should occur spontaneously, keep airway clear. Never give anything by mouth to an unconscious person.

Most important symptoms and effects

Symptoms: May cause dermatitis or irritation in some individuals upon prolonged contact.

Indication of any immediate medical attention and special treatment needed

Note to Physician: Treat symptomatically.

V. **FIRE-FIGHTING MEASURES**

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media: Not determined.

Specific Hazards Arising from Chemical: Combustion products may be toxic.

Hazardous Decomposition Products: Hydrogen chloride.

Protective Equipment and Precautions for Firefighters:

Use water spray to keep fire-exposed containers cool. Do not release runoff from fire control methods to sewers or waterways.

VI. **ACCIDENTAL RELEASE MEASURES/WASTE DISPOSAL**

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Use personal protective equipment as required. Keep unnecessary people away, isolate hazard area and restrict entry.

Environmental Precaution: Do not release into sewers or waterways.

Methods and material for containment and clean up

Methods for Containment: Prevent further leakage or spillage if safe to do so.

Methods for Clean-up: Small spills: If directed to an industrial sewer, wash down with large volumes of water. Spills can be neutralized and absorbed with soda ash or lime, but neutralization will release carbon dioxide, which can generate a breathing hazard. For large spills: dike far ahead of liquid spill for later disposal. Contain large spills and pump into a suitable tank for disposal. Neutralize with a lime or soda ash and flush area with large amounts of water. Adequate ventilation is required due to release of Carbon Dioxide.

VII. **HANDLING AND STORAGE**

Precautions for safe handling

Advice on Safe Handling: Ensure that all containers are labeled in accordance with OSHA regulations. Avoid contact with metal, as product will slowly corrode iron, brass, copper, aluminum and mild steel. Avoid contact with skin, eyes, and clothing. Do not eat, drink or smoke while using this material. Store and handle in accordance with good industrial hygiene and safety practice. Keep container tightly closed when not in use. Use personal protection recommended in Section 8.

Conditions for safe storage, including any incompatibilities

Storage Conditions: Store in a cool, dry place away from direct heat. Keep storage container tightly closed when not in use, in a dry and well-ventilated place. Do not store in unlined metal containers. Product may slowly corrode iron, brass, copper, aluminum and mild steel.

VIII. EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Aluminum chloride hydroxide 12042-91-0	TWA: 1mg/m ³ respirable fraction		

Appropriate engineering controls

Engineering controls: Good general room ventilation should be adequate under normal conditions. Showers. Eyewash stations.

Individual protection measures, such as personal protective equipment:

Eye / Face Protection: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29CFR 1910.133. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with, contact lenses. Eye wash station should be readily available.

Skin Protection: Wear appropriate clothing to prevent repeated or prolonged skin contact. If prolonged or repeated contact is anticipated, all clothing should be impervious to liquid. Impervious gloves, clothing and rubber boots are recommended.

Respiratory Protection: Seek professional advice prior to respirator selection and use. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. **WARNING ! :** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

General Hygiene Considerations: Contaminated Equipment: Separate contaminated work clothes from street clothes. Wash contaminated clothing before reuse. Remove this material from your shoes and clean personal protective equipment. Do not eat, drink, smoke or apply cosmetics while handling this product. Always observe good personal and industrial hygiene measures, such as washing after handling the material and before eating, drinking, smoking, using the toilet, or applying cosmetics. Eyewash and safety showers are recommended.

IX. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:	Clear to light gray slightly hazy liquid
Odor:	Negligible
Odor Threshold:	Not determined
pH:	4.2 ± 0.2
Relative density; specific gravity:	+1.3 (1=Water) @ 4°C
Initial Boiling point/Range:	102-108°C/221 ± 5°F
Melting point/freezing point:	-5.5°C/ 22°F
Decomposition temperature:	±120 °C/250°F
Viscosity:	10-100 centistokes
Auto-ignition temp:	Will not burn.
Evaporation Rate:	Not determined.
Solubility in Water:	Complete in water.
Flash point:	Will not burn
Flammable (solid,gas):	Will not burn.
Upper/lower flammability or	
Explosive limits:	Will not burn
Partition coefficient	Not determined.
(n-octanol/water):	
Solubility:	Soluble in water
Vapor Pressure:	Similar to water
Vapor Density:	Similar to water
VOC Content (%):	0.0

X. STABILITY AND REACTIVITY DATA

Reactivity: Not reactive under normal conditions.

Chemical Stability: Stable under recommended storage conditions.

Conditions to Avoid: Excessive heating after water evaporation for long periods of time can result in the evolution of HCl.

Incompatible Products: Will react with caustics to form aluminum hydroxides. Will corrode ordinary grades of steel.

Haz. Decomposition Products: Hydrogen chloride can be evolved during high temperature heating for extended periods of time.

XI. TOXICOLOGICAL INFORMATION

Likely routes of exposure:

Eye contact: Avoid contact with eyes.

Skin contact: May be harmful in contact with skin.

Inhalation: Avoid breathing vapors or mists.

Ingestion: Do not taste or swallow.

Component information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Aluminum Chloride Hydroxide 12042-91-0	=9187 mg/kg (Rat)	>2,000 mg/kg (Rat)	-

Information on physical, chemical and toxicological effects

Symptoms: Please see Section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity: This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity: Not determined.

XII. ECOLOGICAL INFORMATION

Ecotoxicity

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Aluminum chloride Hydroxide 39290-78-3		LC50 Brachydanio rerio : 100-500 mg/L 96h. static		

Persistence and Degradability: Not determined.

Bioaccumulation: Not determined.

Mobility: Not determined

Other adverse effects: Not determined.

XIII. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste disposal Methods: Dispose of waste in accordance with all regional, federal, state and local laws and regulations.

Contaminated Packaging: Dispose of waste in accordance with all regional, federal, state and local laws and regulations.

XIV. TRANSPORT INFORMATION

DOT: Not regulated

IATA: Not regulated

IMDG: Not regulated

XV. REGULATORY INFORMATION

International Inventories: Not determined.

U. S. Federal Regulations

CERCLA

Does not apply

SARA 311-312 Hazardous Categorization

Chronic Health Hazard	No
Acute Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

SARA 313

This product does not contain any ingredients subject to the reporting requirements of SARA Title III, Section 313 (40 CFR Part 372).

CWA (Clean Water Act)

Not listed

U. S. State Regulations

U.S. State Right-To-Know Regulations

Not determined

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Revision number: New format

NFPA	Health hazards	Flammability	Instability	Special Hazards
	1	0	0	Not determined
HMIS	Health hazards	Flammability	Physical Hazards	Personal Protection
	1	0	0	Not determined

OTHER INFORMATION

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This information is for the specific material described only and may not be valid if the material is used in combination with any other materials or in any process. The user is responsible to determine the completeness of the information and suitability for the user's own particular use. The knowledge and belief of the company, the information is accurate and reliable as of the date indicated but the company makes no express or implied warranty of merchantability for the material or the information. The company makes no express or implied warranty of fitness for a purpose for the material or for the information. Users of any chemical should educate themselves on all aspects of its use by independent investigation of current scientific and medical knowledge that the material can be used safely. Both the supplier and manufacturer make no representations and assume no liability for any direct, incidental or consequential damages resulting from its use. Both the supplier and manufacturer make no warranty of merchantability or any other warranty, expressed or implied, with respect to this

information. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This information is for the specific material described only and may not be valid if the material is used in combination with any other materials or in any process. The user is responsible to determine the completeness of the information and suitability for the user's own particular use. Users of any chemical should educate themselves on all aspects of its use by independent investigation of current scientific and medical knowledge that the material can be used safely. The buyer assumes all responsibility for using and handling the product in accordance with applicable federal, state and local regulations.

List of abbreviations and acronyms that could be, but not necessarily are, used in the safety data sheet:

ACGIH: American Conference of Industrial Hygienists
BEI: Biological Exposure Index
CAS Chemical: Abstracts Service (Division of the American Chemical Society)
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
CMR: Carcinogenic, Mutagenic or Toxic for Reproduction
DOT: Department of Transportation
FG: Food grade
FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act
GHS: Globally Harmonized System of Classification and Labeling of Chemicals
H-statement: Hazard Statement
HMIRC: Hazardous Materials Information Review Commission
HMIS: Hazardous Materials Identification System
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI (ICAO): Technical Instructions by the "International Civil Aviation Organization"
IMDG: International Maritime Code for Dangerous Goods
ISO: International Organization for Standardization
logPow: octanol-water partition coefficient
LCxx: Lethal Concentration, for xx percent of test population
LDxx: Lethal Dose, for xx percent of test population
ICxx: Inhibitory Concentration for xx of a substance
ECxx: Effective Concentration of xx
N.O.S.: Not otherwise specified
NFPA: National Fire Protection Association
NIOSH: National Institute for Occupational Safety and Health
OECD: Organization for Economic Co-operation and Development
OEL: Occupational Exposure Limit
OSHA: Occupational Safety and Health Administration
P-Statement: Precautionary Statement
PBT: Persistent, Bioaccumulative and Toxic
PMRA: Health Canada Pest Management Regulatory Agency
PPE: Personal Protective Equipment
RTK: Right to Know
SDS: Safety Data Sheet
STEL: Short-term exposure limit
STOT: Specific Target Organ Toxicity
TLV: Threshold Limit Value
TWA: Time-weighted average
VPVB: Very Persistent and Very Bioaccumulative
WEL: Workplace Exposure Level
WHMIS: Workplace Hazardous Materials Information System