



Inorganic Coagulant Solve 50C

Material Safety Data Sheet

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COMPANY: WaterSolve, LLC, 4964 Starr St. S.E. Grand Rapids, MI 49546, USA
For Product information call 616-575-8693.

EMERGENCY ONLY
CHEMTEC 1-800-424-9300 24 HOURS PER DAY

I. Product Identification

Product Name: **Solve 50BG**

Chemical Type: Aqueous solution of Aluminum Chloride and Polyaluminum hydroxychloride Solution.

INGREDIENT NAME	CAS NUMBER	WEIGHT %	
Polyaluminum hydroxychloride	1327-41-9	40-60	
Aluminum Chloride	7446-70-0	40-60	
WATER	7732-18-5	Balance	

Traces impurities and additional material names not listed above may also appear in Section 15 towards the end of the MSDs. These materials may be listed for local "Right to Know" compliance and for other reasons.

OSHA Hazard Communication Standard: This product is considered hazardous under the OSHA Hazard Communication Standard.

II. Hazards Identification

*Emergency Overview: An, odorless, clear water white to pale yellow colored liquid. Can cause **significant** irritation and burns to the skin and eyes. May be harmful if swallowed. Not flammable, but may release toxic vapors if decomposed to fire. Vapors may irritate nose and throat.*

Health Effects:

Skin: May cause irritation and/or burns, especially with prolonged contact. Contact may cause severe reddening and swelling.

Eye Contact: Causes irritation and painful burns of the eye and eyelids upon contact. Symptoms are stinging, redness, tearing. May cause severe irritation and/or burn corneal damage (burns).

Ingestion: May cause severe damage to the mouth, throat and stomach.

Inhalation: Exposure to mist can irritate mucus membranes' and respiratory tract (nose, throat, etc.)

Delayed effects: None known.

III. First Aid

Eye Contact: Do not rub. Immediately flush eyes gently for 15 minutes with plenty of water. Call a physician immediately.

Skin Contact: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse.

Inhalation: Remove person from exposure area to fresh air. Seek medical attention if needed. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion: Do not induce vomiting. If conscious, give large quantities of water or milk. Never give anything by mouth to unconscious individual. Seek immediate medical attention.

Advice to Physician: Treat symptomatically.

IV. Fire and Explosion Hazard Data

Flashpoint: Not flammable
Autoignition Temperature: Not applicable
Flash point method: Not applicable
Upper and lower flame limit: Not applicable
Flame propagation rate (solids): Not applicable
OSHA Flammability class: Not applicable
Extinguishing Agents: If involved in a fire, use water. Water spray will probably reduce fumes and any irritating gases.
Fire Fighting Precautions: Use extinguishing media as appropriate for surrounding fire
Unusual Fire and Explosion Haz.: At elevated temperatures, irritating and corrosive hydrogen chloride vapors may be released.
Special Fire Fighting Precautions: Wear Self-contained breathing apparatus (SCBA) and full protective equipment. Cool exposed containers with water spray. Do not splash any spilled material onto personnel.

V. Storage and Handling

See Section 7 for recommended personal protective equipment.

Storage: Keep storage container tightly closed. Store in cool and dry, well ventilated area or cabinet. Isolate from incompatible substances. Store and ship in plastic or rubber-lined containers

Handling: Avoid contact with skin, eyes or clothing. Do not breathe product mists. Use with adequate ventilation. Handle as material of moderate oral toxicity. Do not smoke or eat while handling. Use good housekeeping and personal hygiene. Wash thoroughly after handling. Wear protective clothing. Keep container tightly closed when not in use. Avoid breathing vapor or mist. Remove contained clothing and wash thoroughly after handling.

VI. Accidental Release Measures/Waste Disposal

See Section 7 for recommended personal protective equipment.

Spill or Leak Procedures: Dike area to contain spill. Prevent spreading by using absorbent material. Prevent product from entering drinking water supplies or storm sewers. Neutralize spill with alkali such as soda ash. When using soda ash and other carbonates, carbon dioxide gas may be released. Take precautions to minimize hazards from the release of carbon dioxide. Collect liquid and/or residue and dispose of in accordance with applicable regulations. Wear protective clothing and equipment when cleaning up spill.

Waste Disposal: Dispose of waste in accordance with applicable federal, state, and local laws.

Spills and releases may have to be reported to Federal and/or local authorities.

VII. Applicable Control Measures

Engineering Controls: Use local exhaust if fuming or misty conditions prevail, to keep airborne concentrations below the permissible exposure limits. Natural ventilation is normally adequate in the absence of such conditions.

Personal Protection Equipment:

Eye Protection: Under normal working conditions, wear safety glasses. If there is reasonable probability of liquid contact with the eyes, wear chemical splash goggles and face shield. Eye wash station should be readily available. Do not wear contact lenses.

Skin Protection: Wear impervious (e.g. rubber) gloves and apron, long sleeved shirts, trousers and boots. If prolonged or repeated contact is anticipated, all clothing should be impervious to liquid. Promptly wash any contaminated clothing. Promptly remove any non-impervious items that become contaminated.

Respiratory Protection: A respiratory protecting program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed when ever workplace conditions warrant respirator use. Wear NIOSH/OSHA approved respirator with appropriate cartridge if there is any potential exposure to mists in handling or firefighting.

Additional

Recommendations To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product. Eyewash and safety showers are recommended.

Exposure guidelines

INGREDIENT NAME	ACGIH TLV	OSHA PEL	OTHER LIMIT
Polyaluminum hydroxychloride	2mg/m ³ TWA (as aluminum)	None	None
Aluminum chloride (as Aluminum)	2mg/m ³	2mg/m ³	

³= Biological Exposure Index (ACGIH).

OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:

None

VIII. Typical Physical Properties

Appearance: Clear, water white to pale yellow liquid

Physical state: liquid

Molecular weight: Mixture

Chemical Formula: Mixture

Odor: Odorless

Solubility in water (weight%) 100%

Melting point: <-20 °C

Boiling point: 234.5 °F (110 °C)

Odor: None

PH: ~1-2.5

Specific gravity: ~1.28-1.38 @ 25C

Vapor pressure Not applicable

Vapor density (air=1.0) Not applicable

Evaporation rate: Not applicable

% Volatiles: ~70

Flash point: Not flammable

(Flash point method and additional flammability data are found in Section 4.)

IX. Reactivity Data

Normal Stable (Conditions to Avoid): Stable under normal conditions of use and storage. High temperatures may cause the generation of hydrogen chloride gas.

Incompatibilities: Alkalis and water reactive materials which have exothermic reactions.

Haz. Decomposition Products: At high temperatures (e.g. fire conditions), hydrogen chloride vapor may be generated.

Hazardous Polymerization: Will not occur under normal temperatures and pressures.

X. Toxicological/Ecological Information

Immediate (ACUTE) effects:

Aluminum chloride:

LD50 (oral-rat) = 3450 mg/kg.

LD50 (oral-mouse) = 1130 mg/kg

LD50 (rabbit-skin) = >2 g/kg

IMMEDIATE (ACUTE) EFFECTS: Data not available.

DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS: Data not available.

No data available for ecological information.

XI. DISPOSAL CONSIDERATIONS

RCRA is the unused product a RCRA hazardous waste if discarded? Yes

If yes, the RCRA ID number is: D002 (corrosive).

OTHER DISPOSAL CONSIDERATIONS

If permitted by regulations, material may be neutralized with alkali.

The information offered in Section 13 is for the product as shipped.

Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal methods.

XII. Transportation Information

US DOT HAZARD CLASS/PACKING GROUP: 8, PGIII

US DOT ID NUMBER: UN3264

PROPER SHIPPING NAME: Corrosive liquid, acidic inorganic, N.O.S. (contains Polyaluminum hydroxychloride and aluminum chloride).

TDG HAZARD CLASS/PACKING GROUP: 8, PGIII

TDG ID NUMBER: UN 3264

PROPER SHIPPING NAME: Corrosive liquid, acidic inorganic, N.O.S. (contains polyaluminum hydroxychloride).

For additional information on shipping regulations affecting this material, contact the information number found in section 1.

REGULATORY INFORMATION

Regulatory:

TSCA INVENTORY STATUS: Listed on the TSCA Inventory of Chemical Substances

Other TSCA issues: None

SARA Title III/CERCLA:

“Reportable quantities” (RQ5) and/or “Threshold Planning Quantities” (TPQs) exist for the following ingredients.

Ingredient Name

SARA/CERCLA RQ (lb)

SARA EHS TPQ (lb)

No ingredients listed in this section.

Spills or a release resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center (800-424-8802) and to your local Emergency Planning Committee.

Section 311 Hazard Class: Immediate

Sara 313 Toxic Chemicals:

Component:

CAS#

% by weight

OSHA PEL/ACGIH TLV

Polyaluminum hydroxychloride

1327-41-9

30-60%

2 mg/m³ as TWA

(as aluminum)

WHMIS CLASSIFICATION (CANADA): Class E, D2B. Classified in accordance with WHMIS Controlled Product regulations.

FOREIGN CHEMICAL CONTROL INVENTORY STATUS:

All ingredients listed on European (EINECS), Canadian (DSL), Australian (AICS), Japan (MITI), Korean (ENCS), Philippines (PICCS) and China (IECSC).

Other information: HMIS: 2-0-1

NFPA: 2-0-1

All information, statements, data, advice 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. All information provided herein is intended for use by persons having requisite knowledge, skill and experience in the chemical industry.

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