



Inorganic Solve 50B

Safety Data Sheet

Date Issued: 05/07/2015

Date Revised: 05/07/2015

I. PRODUCT IDENTIFICATION

COMPANY: WaterSolve, LLC, 5031 68TH Street Caledonia, Michigan 49316, USA

For Product information call 616-575-8693 www.gowatersolve.com

Product Name: Solve 50B

Chemical Type: Liquid

Recommended Use Substance/Mixture: Municipal and industrial water and wastewater treatment for the removal of turbidity, color, suspended solids and phosphorus. Sludge compaction and volume reduction. Lagoon treatment. Oily wastewater clarification and dissolved air flotation. Emulsion breaking.

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

Classification of the Substance or Mixture

Classification (GHS-US)

Met. Corr. 1 H290

Eye Dam. 1 H318

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US):



Signal Word (GHS-US) : DANGER

Hazard Statements (GHS-US) :

H290 - May be corrosive to metals.

H318 - Causes serious eye damage.

Precautionary Statements (GHS-US) : P234 - Keep only in original container.

P280 - Wear eye protection, face protection, protective gloves/clothing.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P310-Immediately call a POISON CENTER or doctor.

P321 - Specific treatment (see Section 4).

P332+P313 - If skin irritation occurs: Get medical advice/attention.

P362 - Take off contaminated clothing and wash before reuse.

P390 - Absorb spillage to prevent material damage.

P406 - Store in corrosive resistant container with a resistant inner liner.

OTHER HAZARDS Not contributing to the classification:

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

Unknown Acute Toxicity (GHS-US)---Not available.

III. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CASE #/IDENTIFIER	% (w/w)	Classification (GHS-US)
Aluminum chloride, basic ⁺	1327-41-9	15 - 40	Met. Corr. 1, H290 Eye Dam. 1 H318
Water	7732-18-5	60-100	Not classified

Full text of H-phrases: see section 16

⁺Aluminum chloride, basic causes serious eye damage in solution when pH \leq 2. In solution when $>$ 2, this substance causes serious eye irritation.

*More than one of the ranges of concentration as prescribed by Controlled Products Regulations has been used where necessary, due to varying composition.

**The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200].

IV. FIRST AID

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Gently wash with plenty of soap and water followed by rinsing with water for at least 15 minutes. Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.

Eye Contact: Immediately rinse with water for a prolonged period while holding the eyelids wide open. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 60 minutes. Immediately call a POISON CENTER or doctor/physician.

Ingestion: Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms and Effects Both Acute and Delayed

General: Causes skin irritation. Causes serious eye damage. May cause respiratory irritation.

Inhalation: May cause irritation to the respiratory tract.

Skin Contact: Causes skin irritation.

Eye Contact: Causes serious eye damage.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

V. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not explosive.

Reactivity: Corrosive to metals. Contact with metals may evolve flammable hydrogen gas.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

Firefighting Instructions: Keep upwind. Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Oxides of aluminum.

Other Information: Do not allow the product to be released into the environment.

Reference to Other Sections: Refer to section 9 for flammability properties.

VI. ACCIDENTAL RELEASE MEASURES/WASTE DISPOSAL

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all unnecessary exposure. Avoid all contact with eyes, skin, or clothing. Do not breathe vapor, mist or spray.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Keep upwind.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop leak if safe to do so. Ventilate area. Eliminate ignition sources.

Environmental Precautions

Prevent entry to sewers and public waters. If spill does enter any waterways, including intermittent dry creeks, contact proper local, state, international and federal authorities.

Methods and Material for Containment and Cleaning Up

For Containment: Collect spillage.

Methods for Cleaning up: Absorb and/or contain spill with inert material, then place in suitable container.

Reference to Other Sections

See heading Section 8, Exposure Controls and Personal Protection. Concerning disposal elimination after cleaning, see item 13.

VII. STORAGE AND HANDLING

Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Always wash your hands and other exposed areas with mild soap and water immediately after handling this product. Wash before eating, drinking, smoking and before break and before leaving work. Wash contaminated clothing before reuse. Do not eat, drink or smoke in areas where product is used. Use good housekeeping practices during storage, transfer and handling.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids, Strong oxidizers, Strong bases. Non acid-proof metals. Galvanized surfaces.

Specific End Use(s) : Municipal and industrial water and wastewater treatment for the removal of turbidity, color, suspended solids and phosphorus. Sludge compaction and volume reduction. Lagoon treatment. Oily wastewater clarification and dissolved air flotation. Emulsion breaking. Paper machine pitch control. Retention and drainage aid, pitch control, and neutral size bonding agent for paper machines operating in the pH range of 6.0 to 7.8. Point of application to the paper machine is critical in obtaining maximum benefit. This product may be used on fourdrinier and cylinder machines, as well as twin wire formers. It is effective for a variety of paper and board grades.

VIII. EXPOSURE CONTROL/PERSONAL PROTECTION

Control Parameters

No Occupational Exposure Limits (OELs) have been established for this product or its chemical components.

Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local/state/international regulations are observed.

Personal Protective Equipment: Avoid all unnecessary exposure. Insufficient ventilation: wear respiratory protection. Protective clothing. Protective goggles. Gloves. Corrosion proof clothing.

Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant protective gloves. Wear protective gloves made from PVC, neoprene, nitrile, vinyl or PVR/NBR.

Eye Protection: Chemical goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use a NIOSH-approved air-purifying or supplied-air respirator where airborne concentrations of vapor or mist are expected to exceed exposure limits.

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Consumer Exposure Controls: Do not eat, drink or smoke during use.

IX. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Chemical Formula:	Mixture
Appearance:	Colorless to light amber
Odor:	Not available
Odor threshold:	Not available
Boiling point:	Not available
Melting point:	Not available
Freezing point:	-10°C (14°F)
Auto-ignition Temperature:	Not applicable
Decomposition temperature:	Not applicable
Specific gravity:	1.19 – 1.21
Vapor Pressure:	Not available
pH:	0.6 – 4.0
Solubility:	100%
Flash point:	Non flammable
Flammable Limits (% by vol):	Not available
Explosive Properties:	Product is not explosive
Partition coefficient (n-octanol/water):	Not available
Viscosity:	Not available
Explosion Data-Sensitivity to Mechanical impact:	Not expected to present an explosion hazard due to mechanical impact.
Explosion Data-Sensitivity to Static Discharge:	Not expected to present an explosion hazard due to static discharge.

X. STABILITY AND REACTIVITY DATA

Reactivity: Corrosive to metals. Contact with metals may evolve flammable hydrogen gas.

Chemical Stability: Stable under recommended handling and storage conditions (see Section 7).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight, extremely high or low temperatures, open flames, sources of ignition and incompatible materials.

Incompatible Products: Strong bases, strong acids, strong oxidizers, non acid-proof metals. Galvanized surfaces.

Hazardous Decomposition Products: Hydrochloric acid fumes may be generated.

XI. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data: Not available

Skin/Corrosion/Irritation: Causes skin irritation.

pH: 0.6 – 4.0

Serious Eye Damage/Irritation: Causes serious eye damage.

pH: 0.6 – 4.0

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified
Teratogenicity: Not classified
Carcinogenicity: Not classified
Specific Target Organ Toxicity (Repeated Exposure): Not classified
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): Not classified
Aspiration Hazard: Not classified
Symptoms/Injuries After Inhalation: May cause respiratory irritation.
Symptoms/Injuries After Skin Contact: Causes skin irritation.
Symptoms/Injuries After Eye Contact: Causes serious eye damage.
Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.
Chronic Symptoms: None expected under normal conditions of use.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Aluminum chloride, basic (1327-41-9)	
LD50 Oral Rat	>2000 mg/kg
LD 50 Dermal Rat	>2000 mg/kg
Water (7732-18-5)	
LD50 Oral Rat	>90000 mg/kg

XII. ECOLOGICAL INFORMATION

Toxicity

Not classified

Persistence and Degradability

Not available

Bioaccumulative Potential

Not available

Mobility in Soil

Not available

Other Adverse Effects

Not available

XIII. DISPOSAL CONSIDERATIONS

Waste Treatment Methods: Dispose of waste in accordance with all federal, state, international, territorial, provincial and local regulations.

Ecology-Waste Materials: Avoid release to the environment.

XIV. TRANSPORTATION INFORMATION

DOT: **Regulated**
Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS POLYALUMINUM HYDROXYCHLORIDE)
Hazard Class: 8
UN-NO: UN3264
Label Codes: 8
Packing Group: III
ERG NUMBER: 154

IMDG: **Regulated**
Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS POLYALUMINUM HYDROXYCHLORIDE)
Hazard Class: 8
UN-NO: UN3264
Label Codes: 8
Packing Group: III
EmS-No. (Fire): F-A
EmS-No. (Spillage): S-B

IATA: **Regulated**
Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS POLYALUMINUM HYDROXYCHLORIDE)
Hazard Class: 8
UN-NO: UN3264
Label Codes: 8
Packing Group: III
ERG CODE (IATA): 8L
TDG: **Regulated**
Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS POLYALUMINUM HYDROXYCHLORIDE)
Hazard Class: 8
UN-NO: UN3264
Label Codes: 8
Packing Group: III

XV. REGULATORY INFORMATION

US Federal Regulations

Product Solve 50C	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

Aluminum chloride, basic (1327-41-9):

Listed on the United States TSCA (Toxic Substances Control Act Inventory)

Water (7732-18-5):

Listed on the United States TSCA (Toxic Substances Control Act Inventory)

US STATE REGULATIONS

Neither this product nor its chemical components appear on any US state lists.

Canadian Regulations

Product Solve 50C

WHMIS Classification	Class E- Corrosive Material
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Aluminum chloride, basic (1327-41-9):

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Class E- Corrosive Material
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Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
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This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

OTHER INFORMATION

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Eye Dam. 1	Serious eye damage/eye irritation Category 1
Met. Corr.1	Corrosive to metals Category 1
H290	May be corrosive to metals
H318	Causes serious eye damage

DATE ISSUED: 5/07/2015**DATE REVISED: 5/07/2015****Revision number: 0**

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. The buyer assumes all responsibility for using and handling the product in accordance with applicable federal, state, local and international 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