

# Solve 70G

## Safety Data Sheet

Date Issued: 05/07/2015

Date Revised: 05/07/2015

### I. PRODUCT IDENTIFICATION

Product Name: **Solve 70G**

Company: **WaterSolve LLC, 5031 68<sup>TH</sup> Street, Caledonia, Michigan 49316 USA**

For product information call 616 575-8693 or visit [www.gowatersolve.com](http://www.gowatersolve.com)

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)

#### Intended Use of the Product

**Use of 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. 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.

### II. HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

##### Classification (GHS-US)

Corrosive to metals: H290

Eye Damage 1: H318

##### GHS-Labeling



**GH505**

**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 protective gloves/protective clothing/eye and face protection.

**Response:** 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/physician.

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

#### Substances/Mixture

Name	Product identifier	% (w/w)	Classification (GHS-US)
Water	CAS No 7732-18-5	60-100	Not classified
Aluminum chloride, basic	CAS No 7446-70-0	40-70	H290 Met. Corr. 1 H318 Eye Dam. 1

Full text of H-phrases: See Section 16

Aluminum chloride, basic causes eye damage in solution when pH <2. In solution when pH >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 identify and/or exact percentage of composition has been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

### IV. FIRST AID MEASURES

#### 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).

**Eye Contact:** 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.

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

**Inhalation:** Using proper respiratory protection, immediately move the exposed person to fresh air. Keep at rest and in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

**Ingestion:** Rinse mouth with plenty of water. Do NOT induce vomiting. Seek medical attention immediately.

#### **Most important symptoms and effects, both acute and delayed.**

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

**Inhalation:** May cause respiratory irritation.

**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 excepted 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

#### **Suitable extinguishing media**

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

**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**

**Special protective actions for fire-fighters:** Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**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. Firefighters must use full bunker gear including NIOSH/MSHA approved positive pressure, self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.

**Hazardous Combustion products:** Oxides of aluminum.

**Other information:** Do not allow run-off from fire fighting to enter drains or water sources.

**Reference to Other Sections**

Refer to Section 9 for flammability properties.

**VI. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures:**

**General measures:** Avoid all unnecessary exposure. Do not get in eyes, on skin, or on 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. Notify authorities if liquid enters sewers or public waters.

**Methods and materials for containment and cleaning up:**

**For Containment:** Collect spillage.

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

**Reference to Other Sections**

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

**VII. HANDLING AND STORAGE**

**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 after handling this product, also before eating, drinking, smoking and once again before leaving the workplace. 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 acid, Strong bases, strong oxidizers. Non acid-proof metals. Galvanized surfaces.

**Specific end use:** 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 CONTROLS/PERSONAL PROTECTION

### **Control parameters**

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

### **Exposure controls**

**Appropriate engineering controls:** Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

### **Personal protective equipment**

Avoid all unnecessary exposure. Protective goggles. Gloves, Protective clothing. Corrosion-proof clothing. If insufficient ventilation wear respiratory protections.

**Materials for protective clothing:** Chemical resistant materials and fabrics.

**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.

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

**Skin and body protection:** Wear suitable protective clothing. Chemical resistant suit. Rubber apron, boots.

**Eye protection:** A full face shield is recommended. Chemical goggles.

**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. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

## IV. PHYSICAL AND CHEMICAL PROPERTIES

### **Information on basic physical and chemical properties**

Physical state/color/ Odor:	Liquid, Colorless to light amber
Odor:	Not available
pH:	0.6-4.0
Melting point/range:	Not available
Freezing point:	-18°C (-0.4°F)
Boiling Point/range:	Not available
Flash point:	Not applicable
Auto ignition temperature:	Not applicable
Decomposition temperature:	Not applicable
Flammability solid or gas:	Not applicable
Upper/lower explosion limit:	No applicable
Vapor pressure:	Not available
Relative vapor density at 20°C:	Not available
Relative Density:	Not available
Specific gravity:	1.37-1.40
Solubility:	100%
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

**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 materials:** Strong acids, Strong bases, 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:** Not classified pH: 0.6-4.0

**Serious eye damage/eye irritation:** Causes serious eye damage. pH 0.6-4.0

**Respiratory or skin sensitization:** Not classified.

**Germ cell mutagenicity:** Not classified.

**Carcinogenicity:** Not classified.

**Teratogenicity:** 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 of Toxicological effects-ingredient(s)**

**LD50 AND LC50 data:**

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

**XI. ECOLOGICAL INFORMATION**

**Toxicity:** Not classified

**Persistence and degradability:** Not available

**Bioaccumulative potential:** Not available

**Mobility in soil:** Not available

**Other adverse effects:** Not available

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Recommendations:** Dispose of waste material in accordance with local, state, international, provincial, territorial and national regulations.

**Ecology-Waste Materials:** Avoid release to the environment.

14. **TRANSPORT INFORMATION**

**UN number 3264**

**Land transport**

USDOT

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS POLYALUMINUM HYDROXYCHLORIDE)

Hazard Class: 8

Packing Group: III

UN/ID Number: UN3264

DOT-Labels: 8

ERG number: 154

**Sea transport**

IMDG:

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS POLYALUMINUM HYDROXYCHLORIDE)

Hazard Class: 8

Packing Group: III

UN/ID Number: UN3264

IMDG-Labels: 8

EmS-No. (Fire): F-A

EmS-No. (Spillage): S-B

**Air transport**

IATA

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS POLYALUMINUM HYDROXYCHLORIDE)

Hazard Class: 8

Packing Group: III

UN/ID Number: UN3264

ICAO-Labels: 8

EGR Codes (IATA): 8L

TDG

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS POLYALUMINUM HYDROXYCHLORIDE)

Hazard Class: 8

Packing Group: III

UN/ID Number: UN3264

ICAO-Labels: 8

EGR Codes (IATA): 8L

15. **REGULATORY INFORMATION**

**US Federal Regulations**

Product	
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**

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.

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**

## 16. OTHER INFORMATION

	HEALTH	FLAMMABILITY	REACTIVITY
NFPA	3	0	0
HMIS	3	0	0

### **OTHER INFORMATION**

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.

**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  
STEL: Short-term exposure limit  
SDS Safety Data Sheet  
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  
(WAF): *water-accommodated fraction*