Solve 70G

Safety Data Sheet

Date Issued: 05/18/2018
Date Revised: 05/18/2018

1. PRODUCT IDENTIFICATION

Product Name: **Solve 70G**
Product Form**:** Mixtures
Company: **WaterSolve LLC. 5031 68TH Street, Caledonia, Michigan 49316 USA**
For product information call 616 575-8693 or visit 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
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.

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
GHS Classification
Met. Corr. 1: H290
Eye Dam. 1: H318
GHS-Labeling
Hazard pictograms

GH505

Signal word: **DANGER**
Hazard statements

H290 May be corrosive to metals.
H318 Causes serious eye damage.

Precautionary statements:

P234 Keep only in original container.
P280 Wear protective gloves/protective clothing/eye protection.
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.
P390 Absorb spillage to prevent material damage.

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

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

Unknown Acute Toxicity
Not available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product identifier	% (w/w)	Classification (GHS-US)
Water	CAS No 7732-18-5	30-55	Not classified
Aluminum chloride, basic	CAS No 1327-41-6	45-70	H290 Met. Corr. 1 H318 Eye Dam. 1

Full text of H-phrases: See Section 16

The actual concentration of the ingredient(s) is withheld as a trade secret in accordance with Regulations Amending the Hazardous Products Regulations (HPR) SOR/2018-68 and 29 CFR 1910.1200.

4. 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 30 minutes. Immediately call a POISON CENTER or doctor/physician.

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.

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

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

Most important symptoms and effects, both acute and delayed.

General: Causes serious eye damage.
Inhalation: Prolonged exposure may cause irritation.
Skin contact: Prolonged exposure may cause skin irritation.
Eye contact: Causes serious eye damage.
Ingestion: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.
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).

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures 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.
Firefighting instructions: 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: Aluminum oxides, hydrogen chloride, hydrochloric acid fumes may be generated.

Reference to Other Sections
Refer to Section 9 for flammability properties.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
General measures: Avoid breathing (vapor, mist, spray). Avoid all contact with skin, eyes, and clothing.

For non-emergency personnel:
Protective equipment: Use appropriate personal protection equipment (PPE).
Emergency procedures: Evacuate unnecessary personnel.

For Emergency Personnel
Protective equipment: Equip cleanup crew with proper protection.
Emergency Procedures: Stop leak if safe to do so. Ventilate area.

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. Absorb and contain with inert material. Place contents in suitable container for disposal.
Methods for clean up: Absorb and/or contain spill with inert material, then place in suitable container. Dispose in a safe manner in accordance with local/national regulations.

Reference to Other Sections
See section 8, Exposure Controls and Personal Protection. Concerning disposal after cleaning, see item 13.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Additional Hazards When Processed: May be corrosive to metals. Contact with metals may evolve flammable hydrogen gas.
Hygiene measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, smoking and when leaving work. Use good housekeeping practices during storage, transfer and handling.

Conditions for safe storage including any incompatibilities

Technical measures: Comply with applicable regulations. May be corrosive to metals.

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

Incompatible materials: Non acid-proof metals, galvanized surfaces, bases, water reactive materials, oxidizers.

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

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

Protective goggles. Gloves, Protective clothing. Protective clothing.

Materials for protective clothing: Chemical resistant materials and fabrics.

Hand protection: Wear chemically resistant protective gloves.

Skin and body protection: Wear suitable protective clothing.

Eye protection: Chemical safety goggles.

Respiratory protection: Use 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state:	Liquid
Appearance:	Colorless to yellow or amber colored

Odor:	Not available
Odor Threshold:	Not available
pH:	0.6-3.5
Evaporation rate:	Not available
Melting point:	Not applicable
Freezing point:	< 18ºC (< 64.4 ºF)
Boiling Point:	Not available
Flash point:	Not flammable
Auto ignition temperature:	Not vailable
Decomposition temperature:	Not applicable
Flammability (solid,gas):	Not available
Lower explosion limit:	Not available
Upper explosion limit:	Not available
Vapor pressure:	Not available
Relative vapor density at 20ºC:	Not available
Specific gravity:	1.12-1.40
Solubility:	100%
Partition coefficient (n-octanol/water):	Not available
Viscosity:	Not available

10. 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: Extremely high or low temperatures and incompatible materials.
Incompatible materials: Non acid-proof metals, galvanized surfaces, bases, water reactive materials, oxidizers.
Hazardous decomposition products: None expected under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects-Product

Acute toxicity (oral):	Not classified
Acute toxicity (dermal):	Not classified
Acute toxicity (Inhalation):	Not classified

LD50 and LC50 Data: Not available

Skin corrosion/irritation: Not classified
pH: 0.6-3.5

Eye damage/eye irritation: Causes serious eye damage.
pH 0.6-3.5

Respiratory or skin sensitization: Not classified.
Germ cell mutagenicity: 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/effects after inhalation: Prolonged exposure may cause irritation.
Symptoms/effects after skin contact: Prolonged exposure may cause skin irritation.
Symptoms/effects after eye contact: Causes serious eye damage.
Symptoms/effects after ingestion: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.
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

12. ECOLOGICAL INFORMATION

Toxicity: Not available
Persistence and degradability: Not available
Bioaccumulative potential: Not available
Mobility in soil: Not available
Other adverse effects: Avoid release to the environment.

13. DISPOSAL CONSIDERATIONS

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

Ecology-Waste Materials: Avoid release to the environment.

14. TRANSPORT INFORMATION

TRANSPORTATION CLASSIFICATION	**DOT**	**TDG**	**IMDG**	**IATA**
Identification Number	UN3264	UN3264	UN3264	UN3264
Proper Shipping Name	Corrosive Liquid, Acidic, Inorganic, N.O.S., (Contains Polyaluminum Hydroychloride)	Corrosive Liquid, Acidic, Inorganic, N.O.S., (Contains Polyaluminum Hydroychloride)	Corrosive Liquid, Acidic, Inorganic, N.O.S., (Contains Polyaluminum Hydroychloride)	Corrosive Liquid, Acidic, Inorganic, N.O.S., (Contains Polyaluminum Hydroychloride)
Transport Hazard Class(es)	8	8	8	8
				
Packing Group	III	III	III	III
Environmental Hazards	Marine Pollutant: No	Marine Pollutant: No	Marine Pollutant: No	Marine Pollutant: N/A

Emergency Response	ERG Number: 154	ERAP Index: Not applicable	EMS: F-A, S-B	ERG code (IATA): 8L
Additional Information	Not applicable	Not applicable	Not applicable	Not applicable

15. REGULATORY INFORMATION

Chemical Name (CAS No.)	CERCLA RQ	EPCRA 304 RQ	SARA 302 TPQ	SARA 313
Aluminum chloride, basic (1327-41-9)	Not applicable	Not applicable	Not applicable	No

SARA 311/312
Not present

US TSCA Flags
Not present

US State Regulations
California Proposition 65

Chemical Name (CAS No.)	Carcinogenicity	Developmental Toxicity	Female Reproductive Toxicity	Male Reproductive Toxicity
Aluminum chloride, basic - (1327-41-9)	No	No	No	No

State Right-To-Know Lists

Aluminum chloride, basic (1327-41-9)
U.S. – Massachusetts – Right to Know List – No U.S. – New Jersey – Right to Know Hazardous Substance List – No U.S. – Pennsylvania – RTK (Right to Know) – Environmental Hazard List – No U.S. – Pennsylvania – RTK (Right to Know) – Special Hazardous Substances – No U.S. - Pennsylvania – RTK (Right to Know) List - No

Canadian Regulations

Aluminum chloride, basic (1327-41-9)
Listed on the Canadian DSL (Domestic Substances List) Not listed on the Canadian NDSL (Non-Domestic Substances List)

International Inventories/Lists

Chemical Name (CAS No.)	**Australia AICS**	**Turkey CICR**	**Korea ECL**	**EU EINECS**	**EU ELINCS**	**EU SVHC**	**EU NLP**	**Mexico INSQ**
Aluminum chloride, basic (1327-41-9)	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**	**Yes**

Chemical Name (CAS No.)	China IECSC	Japan ENCS	Japan ISHL	Japan PDSCL	JAPAN PRTR	Philippines PICCS	New Zealand NZIOC	US TSCA
Aluminum chloride, basic (1327-41-9)	**Yes**	**Yes**	**No**	**No**	**No**	**Yes**	**Yes**	**Yes**

16. OTHER INFORMATION

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR).

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

NFPA 704

NFPA Health Hazard: 3 – Materials that, under emergency conditions, can cause serious or permanent injury.
NFPA Fire Hazard: 0 – Materials that will not burn under typical dire conditions.
NFPA Reactivity Hazard: 0 – Material that in themselves are normally stable, even under fire conditions.

HMIS Rating

Health: 3 Serious Hazard – Major injury likely unless prompt action is taken and medical treatment is given.
Flammability: 0 Minimal hazard
Physical: 0 Minimal hazard
PPE: See section 8

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*): w*ater-accommodated fraction*