



Solve 80G

Safety Data Sheet

Date Issued: 05/10/2018

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1. **PRODUCT IDENTIFICATION**

Product Name: **Solve 80G**

Product Form: Mixture

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

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.

2. **HAZARDS IDENTIFICATION**

Classification of the substance or mixture

GHS Classification

Eye Irrit. 2A: H319

Full text of hazard classes and H-statements, see section 16.

Label Elements

GHS-US Labeling

Hazard pictograms (GHS-US):



Signal word (GHS-US):

Hazard statements:

Precautionary statements:

WARNING

H319 Causes serious eye irritation.

P264 Wash hands, forearms, and face thoroughly after handling.

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.

P337 + P313 If eye irritation persists: Get medical advice/attention.



Other Hazards

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

Unknown Acute Toxicity

No data 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 1327-41-9	45 – 70*	Eyen Irrit. 2A, H319

Full text of H-phrases: See Section 16

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

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 at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

Inhalation: When symptoms occur, go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

Most important symptoms and effects, both acute and delayed

General: Causes serious eye irritation.

Inhalation: Prolonged exposure may cause irritation.

Skin contact: Prolonged exposure may cause skin irritation.

Eye contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

Indication of Any immediate medical attention and special treatment needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.



5. **FIRE-FIGHTING MEASURES**

Extinguishing Media

Suitable extinguishing media: Water spray, dry chemical, foam, carbon dioxide.

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 considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: May be 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.

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 eyes, skin, or 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: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters.

Methods and materials for containment and cleaning up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for clean up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

Reference to Other Sections

See section 8 Exposure Controls and Personal Protection and Section 13 for disposal considerations.



7. **HANDLING AND STORAGE**

Precautions for Safe Handling

Additional Hazards When Processed: Handle in accordance with standard industrial practices, and ensure appropriate ventilation. Avoid all contact with skin, eyes, clothing. Do not release into the environment. Hydrochloric acid fumes may be generated if heated.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and when leaving work. Avoid breathing vapors, mist, spray. Avoid contact with skin, eyes and clothing.

Hygiene measures: Handle in accordance with good industrial hygiene and safety procedures.

Conditions for safe storage including any incompatibilities

Technical measures: Comply with applicable regulations.

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

Incompatible materials: Strong acid, Strong bases, strong 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: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal protective equipment: Protective goggles. Gloves. Protective clothing.



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

Hand protection: Wear protective gloves.

Skin and body protection: Wear suitable protective clothing.

Eye protection: Chemical safety goggles.

Respiratory protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known, wear approved respiratory protection.

Other Information: 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
Odor:	Not available
Odor Threshold:	Not available
pH:	2.5-4.4
Evaporation rate:	Not available
Melting point:	-12 - -1°C (10 - 30 °F)
Freezing point:	Not available
Boiling Point:	Not available
Flash point:	Not flammable
Auto ignition temperature:	Not available
Decomposition temperature:	Not available
Flammability (solid or gas):	Not applicable
Lower flammable limit:	Not available
Upper flammable limit:	Not available
Vapor pressure:	Not available
Relative vapor density at 20°C:	Not available
Specific gravity:	1.09-1.44
Solubility:	100%
Partition coefficient (n-octanol/water):	Not available
Viscosity:	Not available

10. **STABILITY AND REACTIVITY**

Reactivity: May be 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: Strong acids, Strong bases, strong oxidizers.

Hazardous decomposition products: Non 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: 2.5-4.4

Eye damage/eye irritation: Causes serious eye irritation.

pH: 2.5-4.4

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: Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/effects after ingestion: Ingestion may cause 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
LD50 Dermal Rat	>2000 mg/kg
Water (7732-18-5)	
LD50 Oral rat	>90000 mg/kg

12. ECOLOGICAL INFORMATION

Toxicity:

Ecology – General: Not classified

Persistence and degradability: Not established

Bioaccumulative potential: Not established

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 all local, regional, national, provincial, territorial and international regulations.

Additional information: Container may remain hazardous when empty. Continue to observe all precautions.

Ecology-Waste Materials: Avoid release to the environment.

14. TRANSPORT INFORMATION

Not regulated for transport according to: US DOT, IMDG, IATA, and Canada's TDG.

15. REGULATORY INFORMATION

US Federal Regulations

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

SARA 311/312

Immediate (Acute) health hazard



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 PDSCCL	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 Irrit. 2A	Serious eye damage/eye irritation Category 2A
H319	Causes serious eye irritation

NFPA 704

NFPA Health Hazard: 1 – Exposure could cause irritation but only minor residual injury even if no treatment is given.
 NFPA Fire Hazard: 0 – Materials that will not burn under typical dire conditions.
 NFPA Reactivity Hazard: 0 – Normally stable, even under fire conditions, and are not reactive with water.

HMIS Rating

Health: 1 Slight Hazard – Irritation or minor reversible injury possible.
 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



WaterSolve
LLC

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*