



## Solve 423

# Safety Data Sheet

Date Issued: 06/17/2021  
Date Revised: 06/03/2020

### 1. IDENTIFICATION

**PRODUCT NAME:** SOLVE 423

#### **RECOMMENDED USE OF THE CHEMICAL AND RESTRICTIONS ON USE**

Use of the substance: Coagulant

Recommended restrictions on use:

**COMPANY:** WaterSolve, LLC, 5031 68<sup>th</sup> Street S.E. Caledonia, MI 49316, USA  
For Product information call 616-575-8693. [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)

### 2. HAZARDS IDENTIFICATION

#### **GHS Classification**

The product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

#### **GHS-Labeling**

Product is not hazardous under US GHS.

#### **Hazard(s) not otherwise classified (HNOC) or not covered/classified by GHS**

**Advice;** Contaminated surfaces will be extremely slippery.

**Potential environmental effects;** This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### **Substances/Mixtures**

Mixture

Chemical nature Aqueous solution of Polymeric quaternary amine.

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

### 4. FIRST AID MEASURES

#### **Description of first aid measures**

**General advice:** Show this safety data sheet to the doctor in attendance.

**Ingestion:** No hazards which require special first aid measures.

**Skin contact:** Wash off immediately with soap and plenty of water.

**Eye contact:** Rinse immediately with plenty of water for at least 15 minutes, also under eyelids.

**Inhalation:** Move to fresh air. No hazards which require special first aid measures.

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

Symptoms No information available.  
Hazards No information available.

**Indication of immediate medical attention and special treatment needed, if necessary**

Treatment No information available.

**5. FIRE FIGHTING MEASURES**

**Suitable Extinguishing Media:** Use water mist, carbon dioxide (CO<sub>2</sub>) or dry powder.

**Unsuitable extinguishing media:** None known.

**Special hazards arising from the substance or mixture:** Contaminated surfaces will be extremely slippery.

**Special protective actions for fire-fighters:** In the event of fire, wear self-contained breathing apparatus.

**Further information:** In the event of fire, cool tanks with water spray.

**6. ACCIDENTAL RELEASE MEASURES**

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

Use personal protective equipment. For personal protection see Section 8.

**Environmental precautions**

Should not be released into the environment.

**Methods and material for containment and cleaning up**

Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Remove residues by scrubbing. Prevent product from entering drains.

**Additional advice**

Contaminated surfaces will be extremely slippery.

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

Handle in accordance with good industrial hygiene and safety practice. For personal protection see Sec. 8.

**Conditions for safe storage, including any incompatibilities**

Store at room temperature.

**Materials to avoid**

Strong oxidizing agents, iron, copper and aluminum.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Components with workplace control parameters**

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Contains no substances with occupational exposure limit values.

**Appropriate Engineering Controls**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Wash hands and face before breaks and immediately after handling the product.

**Individual protection measures, such as personal protective equipment**

**Industrial Hygiene**

Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash hands before breaks and immediately after handling the product.

**Respiratory Protection**

Use respiratory protection if necessary. Use NIOSH/MSHA approved respiratory protection.

**Hand protection**

Impervious gloves

**Eye Protection:**

Tightly fitting safety goggles and face-shield. Eye wash bottle with pure water

**Skin and body protection**

Long sleeved clothing No special requirements.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical state:	liquid
Colour:	Colourless to amber
Odor:	amine-like
Odour threshold:	No data available
Ph:	4 - 7
Freezing/Melting point:	Not applicable
Initial Boiling Point/range:	Not applicable
Flash point:	> 212 °F (Closed Cup) (Does not flash)
Evaporation rate:	Not applicable
Flammability (solid, gas):	Not classified as a flammability hazard
Explosion properties:	
Lower Explosive Limits	No data available
Upper Explosive Limits	No data available
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Vapor Pressure:	No data available
Relative vapour density:	No data available
Density:	1.14– 1.18 g/cm <sup>3</sup>
Solubility in Water:	Completely soluble
Partition coefficient (n-octanol/water)	Not applicable
Auto-ignition temperature:	> 200 °C
Decomposition temperature:	> 212 °F
Viscosity:	
Dynamic	No data available
Kinematic	No data available
Oxidizing potential:	The substance or mixture is not classified as oxidizing.
Surface tension:	Not determined

**10. STABILITY AND REACTIVITY**

**Reactivity**

No data available

**Chemical stability**

Stable

**Possibility of hazardous reactions**

Corrosive to metals.

**Conditions to avoid**

Stable

**Incompatible Materials**

Iron, aluminum, copper, Strong oxidizing agents

**Hazardous Decomposition**

Carbon dioxide (CO<sub>2</sub>), Carbon monoxide, Ammonia, Nitrogen oxides (NO<sub>x</sub>), Hydrogen chloride (HCl)

**11. TOXICOLOGICAL INFORMATION**

**Information on toxicological effects**

<b>Acute oral toxicity:</b>	LD50/Rat/5,000 mg/kg
<b>Acute inhalation toxicity:</b>	LC50/Rat/4 h/>/20 mg/l
<b>Acute dermal toxicity:</b>	LD50/Rabbit/>/2,000 mg/kg
<b>Skin corrosion/irritation:</b>	Result: No skin irritation
<b>Serious eye damage/eye irritation:</b>	Result: No eye irritation

**Respiratory or skin sensitization**

**Skin sensitization:** Conclusion: Not sensitizing.

**Carcinogenicity**

**Carcinogenicity:** Based on available data, the classification criteria are not met.

**Reproductive toxicity**

**Toxicity for reproduction:** Conclusion: Based on available data, the classification criteria are not met.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity effects**

**Aquatic toxicity**

Remarks: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Ecotoxicological information provided is based on a structurally or compositionally similar product.

LC50/96 h/Brancydanio rerio (zebra fish)/OECD Test Guideline 203: 10-100 mg/l

Remarks: Fresh water

EC50/48hr/Daphnia magna (water flea)/Immobilization/OECD Test Guideline 202: > 10-100mg/l

IC50/72 h/Pseudokirchneriella subcapitata (green algae)/Growth inhibition/OECD Test Guideline 201: > 10-100mg/l

**Toxicity to other organisms**

No data available

**Persistence and degradability**

Biological degradability:

Remarks: Ecotoxicological information provided is based on a structurally or compositionally similar product.

Modified Sturm Test/OECD Test Guideline 301B/28d: < 70%

Not readily biodegradable.

**Bioaccumulative potential**

Partition coefficient: n-octanol/water: Not applicable

**Mobility in soil**

Water solubility: completely soluble

Surface tension: not determined

**Other adverse effects**

Additional ecological information: Information given is based on data on the components and the ecotoxicology of similar products. Toxicity on aquatic organisms is rapidly and significantly mitigated by the presence of dissolved organic carbon.

13. **DISPOSAL CONSIDERATIONS**

**Product:** Where possible recycling is preferred to disposal or incineration. In accordance with local and national regulations.

14. **TRANSPORT INFORMATION**

**Land transport**

Not classified as dangerous in the meaning of transport regulations.

**Sea transport**

Not classified as dangerous in the meaning of transport regulations.

**Air transport**

Not classified as dangerous in the meaning of transport regulations.

15. **REGULATORY INFORMATION**

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**SARA Title III Section 311 Categories**

No SARA Hazards

**SARA 302 Extremely Hazardous Substances**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 – Specific Toxic Chemical Listings**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**California Proposition 65**

WARNING: This product contains a chemical(s) known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Epichlorohydrin (106-89-8) < 5 PPM

1,3-Dichloropropan-2-ol (96-23-1) < 500 PPM

3-Chloropropane-1,2-diol (96-24-2) < 100 PPM

Glycidol (556-52-5) < 5 PPM

**Other regulations:** None

**Notification status**

- USA: All components of this product are included on the United States TSCA Chemical Inventory or are not required to be listed on the United States TSCA Chemical inventory.
- Canada: All components of this product are included on the Canada Domestic Substances List (DSL) or are not required to be listed on the Canada Domestic Substance List (DSL).
- European Union: All components of this product are included on the European Inventory of Existing Chemical Substances (EINECS) or are not required to be listed on EINECS.
- Australia: All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on the Australian Inventory of Chemical Substances (AICS).
- China: All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese Inventory.
- Japan: All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese (ENCS) Inventory.
- South Korea: All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean (ECL) inventory
- Philippines: All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine (PICCS) inventory.
- New Zealand: This product's New Zealand Inventory of Chemical Substances (NZIoC) status has NOT been determined.
- Taiwan: This product's Taiwan Toxic Chemical Substances Control Act Inventory status has NOT been determined.

**16. OTHER INFORMATION**

**HMIS Rating**

**Health:** 0  
**Flammability:** 1  
**Reactivity:** 0

**NFPA Rating**

**Health:** 0  
**Fire:** 1  
**Reactivity:** 0

**Training advice:** Read the safety data sheet before using the product.

**OTHER INFORMATION**

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