



Solve 423

Safety Data Sheet

Date Issued: 10/06/2017

Date Revised: 09/15/2017

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **SOLVE 423**

Use of the substance: Coagulant

COMPANY: WaterSolve, LLC, 5031 68th Street S.E. Caledonia, MI 49316, USA
For Product information call 616-575-8693. 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

Classification of the substance or mixture

The material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard's (29CFR 1910.1200) implementation of the Globally Harmonized System (GHS), i.e., material is not a dangerous substance or mixture requiring GHS classification according to the US GHS regulations.

GHS-Labeling: Product is not hazardous under US GHS.

Other hazards which do not result in classification

Advice: The health hazards of this product should be low under normal industrial and commercial uses.

Physical/Chemical Hazard: Spills are very slippery.

Eyes: May cause slight irritation.

Skin: Repeated or prolonged exposure may cause slight irritation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances/Mixtures

Chemical nature

Aqueous solution of Polymeric quaternary amine

No hazardous ingredients

4. FIRST AID MEASURES

Description of first aid measures

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.

5. **FIRE FIGHTING MEASURES**

Suitable Extinguishing Media: Use water mist, carbon dioxide (CO₂) or dry powder.

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

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

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

9. **PHYSICAL AND CHEMICAL PROPERTIES**

Physical state	liquid
Colour	Colourless to amber
Odor:	amine-like
Initial Boiling Point/range:	Not applicable
Melting Point/Range:	Not applicable
Flash point:	> 212° F Closed Cup
	Does not flash
Vapor Pressure:	No data available
Density:	1.14– 1.18 g/cm ³
Solubility in Water:	Completely soluble
Lower Explosive Limits:	No data available
Upper Explosive Limits:	No data available
Partition coefficient (n-octanol/water)	Not applicable
Oxidizing potential:	The substance or mixture is not classified as oxidizing.
Surface tension:	Not determined

10. **STABILITY AND REACTIVITY**

Reactivity

Chemical stability

Possibility of hazardous reactions

Hazardous reactions: Corrosive to metals.

Conditions to avoid: stable

Incompatible Materials: Iron, aluminum, copper, Strong oxidizing agents

Hazardous Decomposition

Products: Carbon dioxide (CO₂)
Carbon monoxide
Ammonia
Nitrogen oxides (NO_x)
Hydrogen chloride (HCl)

11. **TOXICOLOGICAL INFORMATION**

Information on toxicological effects

Acute oral toxicity: Rat/5,000mg/kg/LD50

Acute inhalation toxicity: LC50/Rat/4hr/>/20mg/l

Acute dermal toxicity: LD50/Rabbit/>/2,000mg/kg

Skin corrosion/irritation: Result: No skin irritation

Serious eye damage/eye irritation: Result: No eye irritation

Respiratory or skin sensitization:

Skin sensitization: Conclusion: Not sensitizing.

Carcinogenicity

Reproductive toxicity

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.

LC50/96hr/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

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

Toxicity to other organisms

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

Bioaccumulation is unlikely. Because of the high molecular weight of the polymer diffusion through biological membranes is very small.

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.

EPA Hazardous Waste- NO

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.

Special precautions for user

15. **REGULATORY INFORMATION**

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

SARA Title III Section 311 Categories

No SARA Hazards

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

California Proposition 65

Glycidol (556-52-5) < 0.0005%

Epichlorohydrin (106-89-8) < 0.0005%

1,3 -dichloropropan-2-ol (96-23-1) < 0.049%

3- Chloropropane-1,2-diol (96-24-2) < 0.0099%

Remarks: This product contains a chemical or chemicals known to the state of California to cause cancer, birth defects or other reproduction harm.

Other regulations: None

Notification status

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.

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).

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.

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).

All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese Inventory.

All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese (ENCS) Inventory.

All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean (ECL) inventory

All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine (PICCS) inventory.

This product's New Zealand Inventory of Chemical Substances (NZIoC) status has NOT been determined.

This product's Taiwan Toxic Chemical Substances Control Act Inventory status has NOT been determined.

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