



Solve 425

Safety Data Sheet

Date Issued: 01/27/2020

Date Revised: 12/19/2019

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **SOLVE 425**
Use of the substance/mixture: 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

GHS Classification

The material is not hazardous under the criteria of the Federal OSHZ 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.

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 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

Ingestion

Contact physician if larger quantity has been consumed.

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: Symptomatic treatment

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Water mist, carbon dioxide (CO₂) or dry chemical

Unsuitable extinguishing media

None

Special protective actions for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Use NIOSH/MSHA approved respiratory protections.

Further information

In the event of fire, cool containers/tanks with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For personal protection see Section 8. Use rubber boots.

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. Prevent product from entering drains.

Additional advice

For personal protection see section 8.

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 in the original container.

Materials for packaging

Unsuitable material: To avoid product degradation and equipment corrosion, do not use iron, copper or aluminium containers or equipment.

Materials to avoid

Strong oxidizing agents, iron, copper, aluminum

Storage stability

Storage temperature: 41-86 °F

Other data: Stable under recommended storage conditions.

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. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation.

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:

None under normal use.

Hand protection

Glove material: Imperious gloves. Permeability tests are not available for this product. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Skin and body protection

Long sleeved clothing. No special requirements.

Eye protection

Tightly fitting safety goggles or safety glasses with side-shields.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state: liquid

Form: viscous

Colour:	yellow, to amber
Odor:	amine-like
Odour Threshold:	not determined
pH:	4-7
Freezing/Melting point:	-0.4 °F
Initial Boiling Point/range:	ca. 212 °F
Flash point:	> 212 °F (Closed Cup) (Does not flash)
Evaporation rate:	Similar to water
Flammability (solid, gas):	No data available
Explosive properties:	
Lower Explosion Limits	None
Upper Explosion Limits	None
Oxidizing properties	The substance or mixture is not classified as oxidizing
Vapor Pressure:	No data available
Relative vapor density:	similar to water
Density:	1.100 – 1.200 g/cm ³
Relative density:	No data available
Solubility in Water:	Completely soluble
Partition coefficient (n-octanol/water):	Not applicable
Auto-ignition temperature:	> 200 °C
Decomposition temperature:	> 212 °F
Viscosity:	
Dynamic	550 – 750 mPa.s
Kinematic	No data available
Oxidizing potential:	The substance or mixture is not classified as oxidizing.
Saturation in air (% vol.):	Similar to water
Surface tension:	Not determined

10. **STABILITY AND REACTIVITY**

Reactivity

Stable under recommended storage conditions.

Chemical stability

The product is chemically stable.

Possibility of hazardous reactions

Stable under recommended storage conditions.

Conditions to avoid

Do not freeze.

Incompatible Materials

Aluminum, copper, Strong oxidizing agents, iron

Hazardous Decomposition

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

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute oral toxicity: Conclusion: The acute toxicological results displayed may not be the results of actual testing of this material but based on a similar tested material.
LD50/Rat/5,000 mg/kg
Remarks: estimated

Acute inhalation toxicity: LC50/Rat/4 h/>/20mg/l
Remarks: estimated

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

Skin corrosion/irritation: Conclusion: No skin irritation

Serious eye damage/eye irritation: Conclusion: No eye irritation

Respiratory or skin sensitization:

Respiratory sensitization: Conclusion: Not expected to be irritating

Skin sensitization: Conclusion: Not sensitizing

Germ cell mutagenicity

Genotoxicity in vitro: Conclusion: not mutagenic

Genotoxicity in vivo: AMES test
Result: negative
Micronucleus test/Mouse
Result: negative

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.

Specific target organ toxicity - single exposure /The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ toxicity - repeated exposure /The substance or mixture is not classified as specific target organ toxicant, single exposure.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Aquatic toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

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

Remarks: Fresh water

LC50/96hr/Pimephales promelas (fathead minnow)/Acute toxicity/EPA Method 2000.0: 0.393 mg/l

Remarks: Fresh water

LOEC/96hr/Pimephales promelas (fathead minnow)/Acute toxicity/EPA Method 2000.0: 0.288 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

No data available

Persistence and degradability

Biological degradability:

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

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

Not readily biodegradable.

Chemical degradation:

Does not hydrolyse.

Bioaccumulative potential

Partition coefficient: n-octanol/water: Not applicable

Mobility in soil

Water solubility: completely soluble

Surface tension: No data available

Other adverse effects

Additional ecological information: Information given is based on data on the components and the ecotoxicology of similar products.

13. DISPOSAL CONSIDERATIONS

Product

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

Contaminated packaging

Must be disposed of 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:

The material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard's (29CFR 1910. 1200) implementation of Globally Harmonized System (GHS), i.e., material is not a dangerous substance or mixture requiring GHS classification according to the US GHS regulations.

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.

CERCLA Hazardous substance (Reportable Quantities)

Chemical name	CAS-No.	Reportable quantity
None Present		0 kg

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.

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) < 10 PPM

Notification status:

USA: All components of this product are included in 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 in the Canada Domestic Substance 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 in 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.
Korean:	All components of this product are included in the Korean (ECL) inventory or are not required to be listed on the Korean (ECL) inventory
New Zealand:	All components of this product are included in the New Zealand Inventory (NZIoC) or are not required to be listed on the New Zealand inventory (NZIoC).
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.
Taiwan:	All components of this product are included on the Taiwan Toxic Chemical Substances Control Act Inventory.

16. OTHER INFORMATION

NFPA Rating

Health: 0
Fire: 1
Reactivity: 0

HMIS Rating:

Health: 0
Flammability: 0
Reactivity: 0

Training advice: Read the Safety Data Sheet before using the product.

Revision Date: 12/19/2019

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. 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. 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. The buyer assumes all responsibility for using and handling the product in accordance with applicable federal, state and local 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