



## Solve 425

# Safety Data Sheet

Date Issued: 04/15/2016

Date Revised: 02/26/2015

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **SOLVE 425**

Use of the substance/mixture: Flocculating agent

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

#### **Classification of the Substances/Mixtures**

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.

**Skin:** Repeated or prolonged exposure may cause slight irritation.

**Eyes:** May cause slight irritation.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### **Substances/Mixtures**

Chemical nature

Polyquaternary amine in water

**No hazardous ingredients**

#### **Further information**

The material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard's (29CFR 1910.1200).

### 4. FIRST AID MEASURES

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

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

**Ingestion:** Contact physician if a larger quantity of the product has been consumed.

**Skin contact:** Wash immediately with plenty of soap and water. Do not reuse contaminated clothing without laundering.

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

**Inhalation:** Remove 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 or dry chemical

**Unsuitable extinguishing media:** None

**Special hazards arising from the substance or mixture:** Contaminated surfaces will be extremely slippery. Burning may produce toxic and irritant gases.

**Special protective actions for fire-fighters:** Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. Use NIOSH/MSHA approved respiratory protections. For personal protection see Section 8. Product is very slippery when spilled.

**Further information:** In the event of fire, cool containers/tanks with water spray if safe to do so.

6. **ACCIDENTAL RELEASE MEASURES**

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

Use personal protective equipment. Use rubber boots. Refer to Section 8 (Exposure Controls /Personal Protection) for appropriate personal protective equipment.

**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**

If the product contaminates rivers and lakes or drains inform respective authorities. 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 in the original container.

**Materials for packaging**

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

**Materials to avoid:** Strong oxidizing agents, iron, copper, aluminum, acids

**Storage stability:**

Storage temperature: 41-77°F

Other data: Stable under recommended storage conditions.

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Components with workplace control parameters**

Components	CAS-No.	Value	From of exposure	Control parameters	Update	Basis
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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, eyes and clothing. Wash hands and face before breaks and immediately after handling the product. Do not eat, drink or smoke when using this product. Ensure that eyewash stations and safety showers are close to the workstation location. Do not breathe vapour. Ensure adequate ventilation.

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

**Respiratory protection:** Respiratory protection is not required under normal handling conditions. In case of insufficient ventilation, wear suitable respiratory equipment. Use respiratory protection if necessary. Use NIOSH/MSHA approved respiratory protections.

#### **Hand protection:**

Glove material: Imperious gloves. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. 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.

**Eye protection:** Tightly fitting chemical splash proof goggles, safety glasses with side-shields. Eyewash equipment and safety shower should be provided in areas of potential exposure.

**Skin protection:** Protective clothing. Rubber boots.

**Additional Advice:** Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### **Information on basic physical and chemical properties**

Physical state:	liquid, viscous
Appearance and Odor:	amber liquid, amine odor
pH:	4-7
Initial Boiling Point/range:	ca. 212°F
Melting Point/range:	-04°F
Flash point:	> 199.4° F Closed Cup
Evaporation rate:	Similar to water
Vapor Pressure:	No data available
Relative vapor density:	similar to water
Density:	1,100 – 1,200 kg/m <sup>3</sup>
Solubility in Water:	Complete
Fat solubility (solvent-oil to be specified)-:	insoluble
Lower Explosive Limits:	None
Upper Explosive Limits:	None
Partition coefficient (n-octanol/water):	Not applicable
Decomposition temperature:	> 212°F
Viscosity: Viscosity, dynamic:	550 – 750 mPa.s
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**

#### **Chemical stability**

#### **Possibility of hazardous reactions**

**Hazardous reactions:** Stable under recommended storage conditions.

**Conditions to avoid:** stable

**Incompatible Materials:** aluminum, copper, Strong oxidizing agents, iron

**Hazardous Decomposition Products:** Nitrogen oxides

**Products:** Hydrogen chloride, Ammonia ,Carbon monoxide, Carbon dioxide

**Thermal decomposition:** > 212 °F

## 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/4hr/ >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:**

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

**Germ cell mutagenicity**

**Genotoxicity in vivo:** AMES test Result: negative

Micronucleus test/Mouse Result: negative

**Carcinogenicity**

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

**Reproductive toxicity**

## 12. ECOLOGICAL INFORMATION

### 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)/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

Remarks: Fresh water

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

Remarks: Fresh water

**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.

Chemical degradation: Does not hydrolyse.

### 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: no data available

### 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, international regulations.

EPA Hazardous Waste- NO

**Contaminated packaging:** Must be disposed of in accordance with local, national and international 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.

**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:**

Immediate (Acute) Health Effects: No

Delayed (Chronic) Health Effects: No

Fire Hazard: No

Sudden Release of Pressure Hazard: No

Reactivity Hazard: No

**SARA 302 Extremely Hazardous Substances**

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

None present

**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.

None present.

**California Proposition 65**

Glycidol (556-52-5) < 0.0009%

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.

**Notification status:**

USA: All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical I inventory.

Canada: All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL.

European Union (EU): 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(AICA) or are not required to be listed on 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 Inventory.

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

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

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

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

#### **OTHER INFORMATION**

##### **NFPA HAZARD RATING (National Fire Protection Association)**

**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.**

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#### **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. 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