



Solve 424

Safety Data Sheet

Date Issued: 04/23/2018

Date Revised: 09/15/2017

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: SOLVE 424
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. COMPOSITION/INFORMATION ON INGREDIENTS

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: 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

Chemical nature: Aqueous solution of Polymeric Quaternary Amine
No hazardous ingredients

Further information

The material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard (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

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.

Symptoms: No information available.

5. **FIRE FIGHTING MEASURES**

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

Special hazards arising from the substance or mixture: Burning may produce toxic and irritant gases.

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 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

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 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

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.

Eye protection: Tightly fitting safety goggles, safety glasses with side-shields.

Skin and body protection: Long sleeved clothing. No special requirements.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state:	liquid, aqueous solution
Color:	colorless, or amber
Odor:	amine-like
Initial Boiling Point/range:	ca. 212°F
Melting Point/range:	-18°C
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
Decomposition temperature:	> 212°F
Oxidizing potential:	The substance or mixture is not classified as oxidizing.
Surface tension:	No data available

10. STABILITY AND REACTIVITY

Reactivity

Chemical stability

Possibility of hazardous reactions

Hazardous reactions:	No data available
Conditions to avoid:	stable
Incompatible Materials:	aluminum, copper, Strong oxidizing agents, acids, iron

Hazardous Decomposition Products:	Nitrogen oxides (NO _x) Hydrogen chloride (HCl) Ammonia Carbon monoxide Carbon dioxide (CO ₂)
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Thermal decomposition:	> 212 °F
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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/ >4,670 mg/kg Remarks: estimated
Acute inhalation toxicity:	LC50/Rat/4hr/ >20mg/l Remarks: estimated
Acute dermal toxicity:	LD50/Rabbit/> 10,000 mg/kg
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.
Carcinogenicity	
Carcinogenicity	Based on available data, the classification criteria are not met.

12. ECOLOGICAL INFORMATION

Aquatic toxicity

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

LC50/96h/Scophtalmus maximus (juvenile turbot)/semi-static test/PARCOM: 1,789 mg/l

Remarks: Seawater

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

Remarks: Fresh water

EC50/48h/Acartia tonsa (copepod)/Immobilization/PARCOM: 204 mg/l

Remarks: Seawater

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.

/OECD Test Guideline 306/28d: 0%

Remarks: Seawater

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

No data available

13. DISPOSAL CONSIDERATIONS

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

EPA Hazardous Waste- NO

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.

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.

CERCLA Hazardous Substance (Reportable Quantities)

None Present

0 kg

California Proposition 65

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%

Glycidol (556-52-5) < 0.0009%

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:

USA: All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical 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 (AICS) 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: All components of this product are included in the New Zealand Inventory of Chemical Substances (NZIoC) or are not required to be listed on the New Zealand inventory (ZAIoC).

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: All components of this product are included on the Taiwan Toxic Chemical Substances Control Act Inventory.

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
LC_{xx}: Lethal Concentration, for xx percent of test population
LD_{xx}: Lethal Dose, for xx percent of test population
IC_{xx}: Inhibitory Concentration for xx of a substance
EC_{xx}: 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

