



Solve 127

Safety Data Sheet

Date Issued: 04/24/2015

Date Revised: 04/24/2015

1. IDENTIFICATION OF SUBSTANCE/MIXTURE AND OF COMPANY/UNDERTAKING

PRODUCT NAME: **SOLVE 127**

Use of the Substance/mixture: Flocculating agent

Recommended restrictions on use:

COMPANY: **WaterSolve, LLC, 5031 68th St. S.E. Caledonia, MI 49316, USA**

For Product information call **616-575-8693**.

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

Skin corrosion/irritation; Category 2; Causes skin irritation.

GHS-Labeling

Signal Word:

WARNING

Hazard pictograms



Hazard statements:

H315

Causes skin irritation.

Precautionary Statements:

Prevention:

P264

Wash hands thoroughly after handling.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P302 + P352

IF ON SKIN: Wash with plenty of soap and water.

P332 + P313

If skin irritation occurs: Get medical advice/attention.

P362

Take off contaminated clothing.

Disposal:

P501

Dispose of contents/container as special waste in compliance with local and national regulations.

Other hazards which do not result in classification

Advice: Contaminated surfaces will be extremely slippery.

Eyes: May cause slight irritation.

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

Cationic polyacrylamide.

Hazardous components

CHEMICAL NAME	CAS-NO.	CONCENTRATION %
Distillates (petroleum), hydrotreated light	064742-47-8	20 – 24%
Citric acid	77-92-9	2 – 3%
Alcohols, C10-16, ethoxylated	68002-97-1	0 – 2%
Alcohols, C12-16, ethoxylated	68551-12-2	0 – 3%
Sorbitan oleate	1338-43-8	0 – 2%

Components listed above that have a zero minimum and a common maximum range are interchangeably used components based on availability. Only one of these components is contained in the product up to the maximum amount noted.

4. FIRST AID MEASURES

Description of first aid measures

General Advice: Show this safety data sheet to the doctor in attendance. Move out of dangerous area. Consult a physician.

Ingestion: If swallowed, call a poison control center or physician immediately. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Clean mouth with water and drink afterwards plenty of water. Do not give milk or alcoholic beverages. Obtain medical attention.

Skin contact: Remove contaminated clothing and shoes without delay. Wash immediately with plenty of water. Do not reuse contaminated clothing without laundering. If a person feels unwell or symptoms of skin irritation appear, consult a physician.

Eye contact: Rinse immediately and thoroughly with plenty of water for at least 15 minutes, also under eyelids. Remove contact lenses. Protect unharmed eye. Keep eye wide open when rinsing. If eye irritation persists, consult a specialist.

Inhalation: Remove to fresh air. If there is difficulty in breathing, give oxygen. If symptoms persist, call a physician. Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.

Most important symptoms and effects, both acute and delayed.

Symptoms: No information available.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Use water spray, carbon dioxide or dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: None

Special Hazards arising from the substance or mixture: Fire will produce dense black smoke containing hazardous combustion products (see Section 10).

Special protective actions for fire-fighters: Firefighters, and others exposed, wear self-contained breathing apparatus and protective suit. Wear full firefighting protective clothing. For personal protection see Section 8. Use NIOSH/MSHA approved respiratory protection.

Further information: In the event of fire, cool tanks with water spray. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local, state and federal regulations.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes and clothing. Where the exposure level is not known, wear approved, positive pressure, self-contained respirator. Where the exposure level is known, wear approved respirator suitable for the level of exposure. For personal protection refer to Section 8 (Exposure Controls/Personal Protection) for appropriate personal protective equipment. Use chemical resistant boots.

Environmental precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system. Prevent leakages from entering drains and ditches that lead to natural waterways.

Methods and materials for containment and cleaning up

Hazard of slipping on spilt product. Soak up with inert absorbent material. Shovel into suitable container for disposal. Flush with water. Use detergent if needed.

Additional advice: If the product contaminates rivers and lakes or drains inform respective authorities.

7. HANDLING AND STORAGE

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Advice on protection against fire and explosion: Normal measures for preventive fire protection.

Conditions for safe storage, including any incompatibilities

To avoid product degradation and equipment corrosion, do not use iron, copper or aluminum containers or equipment. Keep container tightly closed in a dry and well-ventilated place. Storage temperature: 39.2 – 89.6°F.

Materials for packaging

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

Material to avoid:

Strong oxidizing agents

Other data: No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	From of exposure	Control parameters	Update	Basis
Distillates (petroleum), hydrotreated light	64742-47-8	TWA		200 mg/m ³	2006-11-29	CA BC OEL
		TWA		197 ppm 1,200 mg/m ³		

Appropriate Engineering controls:

Avoid contact with skin, eye and clothing. Do not breathe vapour, aerosols. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. Keep away from tobacco products. Keep away from food and drink.

Individual protection measures, such as personal protective equipment

Respiratory protection:

Where exposures are below the established exposure limit, no respiratory protection is required. Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure.

Hand protection

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

Eye protection:

Tightly fitting safety goggles. Wear eye/face protection such as chemical splash proof goggles or face shield. Eyewash equipment and safety shower should be provided in areas of potential exposure.

Skin protection:

Avoid skin contact. Chemical resistant protective clothing, and chemical resistant boots. Wear impermeable gloves and suitable protective clothing.

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.

Environmental exposure controls

No data available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	liquid, viscous
Odor:	slight hydrocarbon odor
Color:	opaque, greenish, to milky, white
Initial Boiling Point/Range:	212 °F
Melting Point/range:	Not applicable
Flash point:	>100°C 212°F closed cup (Pensky-Martens)
Vapor Pressure:	Similar to water
Specific Gravity:	~1.0
Vapor Density:	similar to water
Relative vapor density:	like water
Density:	approx. 1.02 g/cm ³
pH:	3-6
Solubility in Water:	Limited by viscosity
Flash point:	>100°C 212°F closed cup
Explosive properties	
Limits Lower/Upper):	Not available
Decomposition temp:	Not available
Viscosity kinematic:	>20.5 mm ² /s (40°C)
Oxidizing potential:	The substance or mixture is not classified as oxidizing.
Saturation in air(% vol.):	No data available
Partition coefficient (n-octanol/water)	Not applicable
Surface tension:	Not determined

10. STABILITY AND REACTIVITY

Reactivity: stable under recommended storage conditions.

Chemical stability: No decomposition if stored and applied as directed.

Possibility of hazardous reactions

Hazardous reactions: hazardous polymerization does not occur.

Note: Stable under recommended storage conditions. No decomposition if used as directed.

Conditions to avoid

Conditions to avoid: Stable under recommended storage conditions.

Incompatible materials

Material to avoid: Strong oxidizing agents

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

Hazardous decomposition products

Hazardous decomposition: Products: Carbon dioxide , carbon monoxide , Ammonia, Nitrogen oxides (NOx), Hydrogen chloride (HCl), Sulphur dioxide

Thermal decomposition: Note: No data available.

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. />/Rat/5,000 mg/kg/LD50 Oral
Acute oral toxicity	Distillates (petroleum), hydrotreated light: />/Rat/5,000 mg/kg/LD50
Acute inhalation toxicity	Remarks: estimated LD50/Rat/4h/>20mg
Acute inhalation toxicity	Distillates (petroleum), hydrotreated light: LC50/Rat/4h/>5.2 mg/l
Acute dermal toxicity	Remarks: estimated LD50/Rabbit/> 2,000 mg/kg
Acute dermal toxicity	Distillates (petroleum), hydrotreated light: LD50/Rabbit/> 2,000 mg/kg
Skin corrosion/irritation	Remarks: Information given is based on data obtained from similar substances. Conclusion: Skin irritation.
Serious eye damage /eye irritation	Remarks: May cause eye irritation with susceptible persons. Conclusion: The toxicological data has been taken from products of similar composition.
Respiratory or skin sensitization	
Skin sensitization	Conclusion: Not sensitizing.
Skin sensitization	Distillates (petroleum), hydrotreated light: Conclusion: This substance is not classified as a sensitizer.
Germ cell mutagenicity	
Genotoxicity in vivo:	Ames test/Salmonella typhimurium (bacterium) Conclusion: No data available.
Genotoxicity in vitro:	Distillates (petroleum), hydrotreated light: Conclusion: No known effect.
Genotoxicity in vitro:	Distillates (petroleum), hydrotreated light: Conclusion: not mutagenic
Carcinogenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Distillates (petroleum), hydrotreated light: Not classified by IARC or NTP.
Reproductive toxicity	Conclusion: Based on available data, the classification criteria are not met.
Reproductive toxicity	Distillates (petroleum), hydrotreated light: Conclusion: Did not show teratogenic effects in animal experiments.

12. **ECOLOGICAL INFORMATION**

Ecotoxicity effects

Aquatic toxicity

LC50/96h/(*Branchydanio rerio*)Zebra fish/Acute toxicity/OCED Test Guideline 203: >1-10 mg/l

Remarks: similar product

EC50/48h/(*Daphnia magna*) Water Flea /: 10 – 100mg/l

Remarks: Similar product

Algae/Growth inhibition/OECD Test Guideline 201

Due to the cationicity of the polymer, test is not appropriate.

Remarks: The effects on aquatic organisms are due to an external (non-systemic) mode of action and are significantly reduced (by a factor of 7-20) within 30 minutes due to the binding of the product to dissolved organic carbon and inorganic sorbents such as clays and silts.

Toxicity to other organisms: No data available.

Persistence and degradability:

Biological degradability: Modified Sturm TEST/OECD Test Guideline 301B:

Not readily biodegradable.

Bioaccumulative potential: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water: No applicable.

Mobility in soil

Water solubility: Limited by viscosity.

Surface tension: Not determined

Other adverse effects

No data available

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

13. **DISPOSAL CONSIDERATIONS**

Product

Recycling, recovery and reuse of materials is recommended if permitted by regulations. If recycling is not practicable, dispose of in compliance with local regulations. Incineration is recommended.

Packages that cannot be cleaned must be disposed of the same way as the unused product.

EPA Hazardous Waste- NO

Do not dispose of waste into sewer. Do not contaminated ponds, waterways or ditches with chemical or used container. Offer surplus and non-recyclables solutions to a licensed disposal company.

Contaminated Packaging

Packages that cannot be cleaned must be disposed of the same way as the unused product. Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

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

No data available

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: Yes

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

Acrylamide (79-06-1) < 0.1 %

Remarks: This product contains a chemical or chemicals known to the State of California to cause cancer, birth defects of other reproductive 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 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 2- Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

Fire 1 – Materials that must be preheated before ignition can occur.

Reactivity 0 –Materials that in themselves are normally stable, even under fire exposure conditions.

HMIS Rating:

Health: 2

Flammability: 1

Reactivity: 0

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

DATE ISSUED: 4/24/2015

DATE REVISED: 4/24/2015

Revision number: 0

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