



Solve 124

Safety Data Sheet

Date Issued: 06/14/2017

Date Revised: 11/28/2016

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

PRODUCT NAME: **SOLVE 124**

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

Eye irritation; Category 2; Causes serious eye irritation.

GHS-Labeling

Hazard pictograms



Signal Word: WARNING

Hazard statements: H319 Causes serious eye irritation.

Precautionary Statements:

Prevention:	
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:	
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.

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

Cationic polyacrylamide, emulsion.

Hazardous components

CHEMICAL NAME	CAS-NO.	CONCENTRATION %
Distillates (petroleum), hydrotreated light	064742-47-8	20 – 28%
Citric acid	77-92-9	1.5– 3.0%
Alcohols, C10-16, ethoxylated	68002-97-1	0 – 3.5%
Alcohols, C12-16, ethoxylated	68551-12-2	0 – 3.5%
Alcohols, C12-14, ethoxylated	68439-50-9	0 – 3.5%
Alcohols, C13-15, branched and linear, ethoxylated	157627-86-6	0 – 3.5%
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. Distillates (petroleum), hydrotreated light.	64742-47-8	20-28%
Alcohols, C12-16, ethoxylated	68551-12-2	0 – 2.6%
Alcohols, C12-14, ethoxylated	68439-50-9	0 – 2.6%
Alcohols, C10-16, ethoxylated	68002-97-1	0 – 2.6%
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4. **FIRST AID MEASURES**

Description of first aid measures

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

Ingestion: Rinse mouth with water. Call a physician immediately. DO NOT induce vomiting.

Skin contact: Remove contaminated clothing and shoes without delay. Wash off with plenty of water. Consult a physician if necessary.

Eye contact: Rinse thoroughly with plenty of water, also under eyelids. If symptoms persists, consult a physician.

Inhalation: Remove to fresh air. If there is difficulty in breathing, medical advice is required.

Most important symptoms and effects, both acute and delayed.

5. **FIRE FIGHTING MEASURES**

Suitable Extinguishing Media: Use water spray, 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: Wear self-contained breathing apparatus and protective suit.

Further information: In the event of fire, cool tanks with water spray. Prevent fire extinguishing water from contaminating surface water or the ground water.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For personal protection see Section 8. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

Environmental precautions

Try to prevent the material from entering drains or water courses.

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.

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.

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 of equipment.

Material to avoid:

Strong oxidizing agents

Storage stability:

Storage temperature: 39.2 – 89.6°F

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		Vapour	197 ppm 1,200 mg/m ³		
		TWA		200 mg/m ³	2006-11-29	CA BC OEL

Appropriate Engineering controls:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes and clothing. Do not breathe vapour. Ensure that eyewash stations and safety showers are close to workstation location. Ensure adequate ventilation.

Wash hands before breaks and immediately after handling the product. Wash hands before eating, drinking, or smoking. Keep away from food, drink and animal feeding stuff. Keep away from tobacco products.

Individual protection measures, such as personal protective equipment

Respiratory protection:

When there is a potential for airborne exposures in excess of applicable limits, wear NIOSH/MSHA approved respiratory protection.

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. Ensure that eyewash equipment and safety shower are close to the workstation location.

Skin and body protection:

Avoid skin contact. Protective clothing.

Environmental exposure controls:

Should not be released into the environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	liquid, viscous
Odor:	hydrocarbon-like
Color:	opaque, greenish
Initial Boiling Point/Range:	212 °F
Flash point:	>199.4°F closed cup (Pensky-Martens)
Evaporation rate:	No data available
Vapor Pressure:	Similar to water
Density:	8.66 lb/gal
Bulk density:	1.037 kg/m ³
pH:	3-6
Solubility in Water:	Aqueous solution
Explosive properties	Limited by viscosity
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.
Partition coefficient (n-octanol/water):	No data available
Surface tension:	Not determined

10. STABILITY AND REACTIVITY

Reactivity

Chemical stability

Possibility of hazardous reactions

Hazardous reactions: hazardous polymerization does not occur.

Conditions to avoid

Conditions to avoid: None known.

Incompatible materials

Material to avoid: Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition: Products: Carbon oxides (CO_x), Ammonia, Nitrogen oxides (NO_x), Hydrogen chloride (HCl)

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 Remarks: estimated
Acute oral toxicity	Distillates (petroleum), hydrotreated light: />/Rat/5,000 mg/kg/LD50
Acute inhalation toxicity	Remarks: estimated LC50/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	OECD Test Guideline 439/Read-across (Analogy) Conclusion: No skin irritation.
Serious eye damage /eye irritation	Calculation method Conclusion: Causes serious eye irritation.
Respiratory or skin sensitization Mucous membranes	Conclusion: No data available
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 vitro:	Distillates (petroleum), hydrotreated light: Conclusion: No known effect.
Genotoxicity in vivo:	Conclusion: Based on available data, the classification criteria are not met.
Genotoxicity in vivo:	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.

Aspiration Hazard

Aspiration toxicity

No aspiration toxicity classification.

12. **ECOLOGICAL INFORMATION**

Ecotoxicity effects

Aquatic toxicity

Remarks: This material is not classified as dangerous for the environment. Ecotoxicological information provided is based on a structurally or compositionally similar product. 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.

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

Remarks: fresh water

EC50/48h/(*Daphnia magna*) Water Flea/Immobilization/OECD Test Guideline 202: >10 – 100mg/l

IC50/72h/Marine Algae (*Skeletonema costatum*)/Growth inhibition/OECD Test Guideline 201: 14.7 mg/l

Toxicity to other organisms:

No data available.

Persistence and degradability:

Biological degradability:

CO2 Evolution Test/OECD Test Guideline 301B:

Not readily biodegradable.

Bioaccumulative potential:

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

Partition coefficient: n-octanol/water: No data available.

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

Contaminated Packaging

Dirty package must be disposed of the same way as the product itself.

14. **TRANSPORT INFORMATION**

Land transport

Not classified as dangerous in the meaning of transport regulations.

Store between 5-30°C

Protect from frost.

Keep away from direct sunlight.

Sea Transport

Not classified as dangerous in the meaning of transport regulations.

Store between 5-30°C

Protect from frost.

Keep away from direct sunlight.

Air transport

Not classified as dangerous in the meaning of transport regulations.

Store between 5-30°C

Protect from frost.

Keep away from direct sunlight.

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) < 600 PPM

Ethylene oxide (75-21-8) <=0.25 PPM

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:

All components of this product are included on the United States TSCA Chemical Inventory or are not required to be listed on the 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

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

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

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

16.

OTHER INFORMATION

NFPA HAZARD RATING (National Fire Protection Association)

Health 2

Fire 1

Reactivity 0

HMIS Rating:

Health: 2

Flammability: 1

Reactivity: 0

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

DATE ISSUED: 06/14/2017

DATE REVISED: 11/28/2016

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