



## Solve 124

### Safety Data Sheet

Date Issued: 09/01/2021

Date Revised: 06/04/2020

#### 1. IDENTIFICATION

PRODUCT NAME: SOLVE 124

##### Recommended Use of the chemical and restrictions on use:

Use of the Substance/mixture: Water treatment chemical

Recommended restrictions on use:

COMPANY: WaterSolve, LLC, 5031 68<sup>th</sup> 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

##### GHS Classification

Eye irritation; Category 2.

##### 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.

##### 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 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

Mixture

Chemical nature

Cationic polyacrylamide, emulsion.

#### Hazardous components

Chemical name	CAS-No.	Concentration [%]
distillates (petroleum), hydrotreated light	64742-47-8	20 - 28 %
Alcohols, C12-16, ethoxylated	68551-12-2	0 - 2.6 %
Alcohols, C10-16, ethoxylated	68002-97-1	0 - 2.6 %
Alcohols, C12-14, ethoxylated	68439-50-9	0 - 2.6 %
Citric acid	77-92-9	1.5 - 2.2 %

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:** When symptoms persist or in all cases of doubt seek medical advice.

**Ingestion:** Rinse mouth with water. Do NOT induce vomiting. Obtain medical attention.

**Skin contact:** Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water. If symptoms persist, call a physician. Wash contaminated clothing before re-use.

**Eye contact:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

**Inhalation:** Move to fresh air. Consult a physician if necessary.

#### 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:** Use water spray, carbon dioxide (CO<sub>2</sub>) or dry chemical.

**Unsuitable extinguishing media:** No special requirements.

**Special Hazards arising from the substance or mixture:** Contaminated surfaces will be extremely slippery.

**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.

6. **ACCIDENTAL RELEASE MEASURES**

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

Wear respiratory protection. 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.

**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.

**Additional advice**

Keep people away from spill/leak.

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. Flashpoint determination was performed using a Pensky Martens type closed cup method. The method indicates a flash point greater than 93,3° C (200° F). Although there was no flashpoint detected below 93,3° C (200° F) some flammable vapours were evolved during the test as evidenced by the enlargement of the flame. Therefore, caution should be exercised during storage and handling.

**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**

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

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 <sup>3</sup>		

**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 the workstation location. Ensure adequate ventilation.

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

#### **Industrial Hygiene**

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

#### **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.

#### **Skin and body protection**

Avoid contact with skin. Protective clothing.

#### **Eye protection**

Tightly fitting safety goggles Ensure that eyewash stations and safety showers are close to the workstation location.

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

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

Physical state	liquid
Form	viscous
Colour	greenish, to, milky
Odour	hydrocarbon-like
Odour Threshold	No data available
pH	3 - 6
Freezing point/Melting point:	Aqueous solution
Initial boiling point and boiling range	Not applicable
Flash point	Boiling point/boiling range 212 °F
Evaporation rate	> 199.4 °F (closed cup) (Pensky-Martens)
Flammability (solid, gas)	No data available
Explosive properties:	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Vapour pressure	similar to water
Relative vapour density	No data available
Density	8.66 lb/gal
Relative density	No data available
Bulk density	1.037 kg/m <sup>3</sup>
Solubility(ies):	
Water solubility	Limited by viscosity.
Partition coefficient:	

noctanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity:	
Viscosity, dynamic	No data available
Viscosity, kinematic	No data available
Surface tension	Not determined

## 10. STABILITY AND REACTIVITY

### Reactivity

No data available

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

Hazardous polymerisation does not occur.

### Conditions to avoid

Stable under normal conditions.

### Incompatible materials

Strong oxidizing agents

### Hazardous decomposition products

Ammonia

Carbon oxides

Nitrogen oxides (NO<sub>x</sub>)

Gaseous hydrogen chloride (HCl).

## 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 oral toxicity

**Distillates (petroleum), hydrotreated light:**

LD50/Rat/>/5,000 mg/kg

#### Acute inhalation toxicity

LC50/Rat/4 h/>/20 mg/l

Remarks: estimated

#### Acute inhalation toxicity

**Distillates (petroleum), hydrotreated light:**

LC50/Rat/4h/>5.2 mg/l

#### Acute dermal toxicity

LD50/Rabbit/>/2,000 mg/kg

Remarks: estimated

#### 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.
<b>Serious eye damage/eye irritation</b>	Calculation method Conclusion: Causes serious eye irritation.
<b>Respiratory or skin sensitization</b>	
<b>Skin sensitization</b>	Conclusion: Not sensitizing.
<b>Skin sensitization</b>	<b>Distillates (petroleum), hydrotreated light:</b> Conclusion: This substance is not classified as a sensitizer.
<b>Germ cell mutagenicity</b>	
<b>Genotoxicity in vitro:</b>	AMES test Conclusion: No data Available
<b>Genotoxicity in vitro:</b>	<b>Distillates (petroleum), hydrotreated light:</b> Conclusion: No known effect.
<b>Genotoxicity in vivo:</b>	<b>Distillates (petroleum), hydrotreated light:</b> Conclusion: not mutagenic
<b>Carcinogenicity</b>	
<b>Carcinogenicity</b>	/Rat No data available
<b>Carcinogenicity</b>	<b>Distillates (petroleum), hydrotreated light:</b> Not classified by IARC or NTP.
<b>Reproductive toxicity</b>	
<b>Toxicity for reproduction</b>	Developmental toxicity test/Rat Conclusion: No data available
<b>Toxicity for reproduction</b>	<b>Distillates (petroleum), hydrotreated light:</b> Conclusion: Did not show teratogenic effects in animal experiments.
<b>Aspiration hazard</b>	
<b>Aspiration toxicity</b>	No aspiration toxicity classification

## 12. ECOLOGICAL INFORMATION

### **Ecotoxicity effects**

#### **Aquatic toxicity**

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

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

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

IC50/72 h/algae/Growth inhibition/OECD Test Guideline 201: Test is not appropriate due to the flocculating characteristics of the product.

#### **Toxicity to other organisms:**

No data available.

**Persistence and degradability:**

Biological degradability:

CO2 Evolution Test/OECD Test Guideline 301B:

The polymeric ingredient is not readily biodegradable, but degradable by hydrolysis. Transmission of polyelectrolytes through biological membranes is nonexistent due to large molecule size and its hydrophilic nature.

**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.

**Contaminated Packaging**

Dispose of in compliance with local and national regulations.

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**

None known.

15. **REGULATORY INFORMATION**

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**SARA Title III Section 311 Categories:**

Eye irritation, Category 2,

**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.

**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](http://www.P65Warnings.ca.gov).

Acrylamide (79-06-1) < 0.0201 %

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

**Other regulations:** None

**Notification status:**

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.
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).
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.
South Korea:	All components of this product are included in the Korean (ECL) inventory or are not required to be listed on the Korean (ECL) inventory.
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.
New Zealand:	All components of this product are NOT included on the New Zealand Inventory of Chemical Substances.
Taiwan:	All components of this product are NOT included on the Taiwan Chemical Substances Inventory.

16. **OTHER INFORMATION**

**HMIS Rating**

Health: 2

Flammability: 1

Reactivity: 0

**NFPA Rating**

Health: 2



Fire: 1  
Reactivity: 0

### **Training advice**

Read the safety data sheet before using the product.

### **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