



# Solve 154

## Safety Data Sheet

Date Issued: 09/01/2021  
Date Revised: 06/05/2020

### 1. IDENTIFICATION

**PRODUCT NAME:** SOLVE 154

**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. [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

**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

Anionic polyacrylamide, emulsion.

#### Hazardous components

CHEMICAL NAME	CAS-NO.	CONCENTRATION %
Distillates (petroleum), hydrotreated light	064742-47-8	20 - 23 %
Alcohols, C10-16, ethoxylated	68002-97-1	0 – 2.7 %
Alcohols, C12-14, ethoxylated	68439-50-9	0 – 2.7 %
Alcohols, C12-16, ethoxylated	68551-12-2	0 – 2.7 %

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.

##### Ingestion:

If swallowed, call poison control center or a 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.

##### Skin contact:

Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water. Wash contaminated clothing before reuse. Call physician if irritation persists.

##### Eye contact:

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

##### Inhalation:

Remove to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.

##### Most important symptoms and effects, both acute and delayed.

Symptoms: No data available.

Hazards: Risk of serious damage to eyes.

##### Indication of immediate medical attention and special treatment needed, if necessary

Treatment: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Treat symptomatically.

### 5. FIRE FIGHTING MEASURES

#### Suitable Extinguishing Media:

Use water spray, alcohol-resistant foam, carbon dioxide or dry chemical.

#### Unsuitable extinguishing media:

High volume water jet. Water may be ineffective.

#### Special Hazards arising from the substance or mixture:

No information available.

**Special protective actions for fire-fighters:**

Wear self-contained breathing apparatus and protective suit. Use NIOSH/MSHA approved respiratory protection.

**Further information:**

Cool containers/tanks with water spray.

**6. ACCIDENTAL RELEASE MEASURES**

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

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. Use chemical resistant boots. For personal protection see Section 8.

**Environmental precautions**

Discharge into the environment must be avoided. Prevent product from entering drains.

**Methods and materials for containment and cleaning up**

Sweep up to prevent slipping hazard. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Shovel into suitable container for disposal. After cleaning, flush away traces with water. Use detergent if needed.

**Additional advice**

For personal protection see section 8.

**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. To avoid product degradation and equipment corrosion, do not use iron, copper or aluminum containers or equipment. Flashpoint determinations was performed using a Pensky-Martens type close cup test 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) by the Pensky-Martens Closed Tester method, some flammable vapors were evolved during the test as evidenced by the enlargement of the test flame: Therefore, caution should be exercised during storage and handling.

**Material to avoid:**

Strong oxidizing agents

**Storage stability:**

Other data      Store at room temperature.  
Reason: integrity

**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.

#### **Appropriate Engineering controls**

Dose and handle in closed system if possible. Handle only in a place equipped with local exhaust (or other appropriate exhaust). Remove and wash contaminated clothing before re-use. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before breaks and immediately after handling the product.

Ensure adequate ventilation.

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

##### **Industrial Hygiene**

Handle in accordance with good industrial hygiene and safety practice.

##### **Respiratory protection**

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

##### **Hand protection**

Glove material: Imperious gloves. 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.

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

Protective clothing.

##### **Environmental exposure controls**

No data available

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

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

<b>Physical state:</b>	liquid
<b>Form:</b>	emulsion
<b>Color:</b>	gray to white
<b>Odor:</b>	ammoniacal
<b>Odor Threshold:</b>	not determined
<b>pH:</b>	6-8 (as aqueous solution)
<b>Freezing/Melting Point:</b>	-0.4 °C – 32 °F
<b>Initial boiling point/range:</b>	177-260 °F
<b>Flash point:</b>	200 °F (closed cup)
<b>Evaporation rate:</b>	
<b>Flammability (solid, gas):</b>	Not classified as a flammability hazard.
<b>Explosive properties:</b>	
<b>Lower explosion limit</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Oxidizing properties</b>	The substance or mixture is not classified as oxidizing.
<b>Vapor pressure:</b>	No data available
<b>Relative Vapor Density:</b>	No data available
<b>Density:</b>	8.68 lb/gal
<b>Relative density:</b>	No data available
<b>Bulk density:</b>	1.042 kg/m <sup>3</sup>
<b>Water solubility:</b>	Completely miscible

<b>Partition coefficient:</b>	
<b>n-octanol/water:</b>	Not applicable
<b>Auto-ignition temperature:</b>	No data available
<b>Decomposition temp:</b>	No data available
<b>Viscosity:</b>	
<b>Dynamic</b>	No data available
<b>Kinematic</b>	> 20.5 mm <sup>2</sup> /s (104 °F)
<b>Oxidizing potential:</b>	The substance or mixture is not classified as oxidizing.
<b>Surface tension:</b>	No data available

## 10. STABILITY AND REACTIVITY

### Reactivity

Not classified as a reactivity hazard.

### Chemical stability

Stable under normal conditions.

### Possibility of hazardous reactions

Hazardous polymerization does not occur.

### Conditions to avoid

Stable under normal conditions.

### Incompatible materials

Strong oxidizing agents.

### Hazardous decomposition products

Carbon oxides, Ammonia, Nitrogen oxides (NOx)

## 11. TOXICOLOGICAL INFORMATION

### Information on toxicological effects

<b>Acute oral toxicity:</b>	LD50/Rat/>/5,000 mg/kg Remarks: estimated
<b>Acute oral toxicity:</b>	<b>Distillates (petroleum), hydrotreated light:</b> LD50/Rat/>5,000 mg/kg
<b>Acute inhalation toxicity:</b>	LC50/Rat/4 h />/20mg/l Remarks: estimated
<b>Acute inhalation toxicity:</b>	<b>Distillates (petroleum), hydrotreated light:</b> LC50/Rat/4 h/>/5.2 mg/l
<b>Acute dermal toxicity:</b>	LD50/Rabbit/>/2,000 mg/kg Remarks: estimated
<b>Acute dermal toxicity:</b>	<b>Distillates (petroleum), hydrotreated light:</b> LD50/Rabbit/>/2,000 mg/kg
<b>Skin corrosion/irritation:</b>	OECD Test Guideline 439/Read-across (Analogy) Conclusion: No skin irritation.
<b>Serious eye damage /eye irritation</b>	Calculation method Results: Causes serious eye irritation.

**Respiratory or skin sensitization**

**Skin sensitization:**

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

**Skin sensitization:**

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

Conclusion: This substance is not classified as a sensitizer.

**Germ cell mutagenicity**

**Genotoxicity in vitro:**

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

**Genotoxicity in vivo:**

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

Conclusion: Not mutagenic

**Genotoxicity in vivo:**

Conclusion: No data available.

**Genotoxicity in vivo:**

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

Conclusion: not mutagenic

**Carcinogenicity**

**Carcinogenicity:**

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

**Carcinogenicity:**

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

Not classified by IARC or NTP.

**Reproductive toxicity**

**Toxicity for reproduction:**

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

**Toxicity for reproduction:**

**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**

This material is not classified as dangerous for the environment. Acute toxicity tests conducted using environmentally representative water.

LC50/ 96hr/ Pimephales promelas (Fathead minnow) / US EPA TSCA Test Guidelines: 21 mg/l

Remarks: Information given is based on data obtained from similar substances.

LC50/ 96hr/ Oncorhynchus mykiss (Rainbow trout)/US EPA TSCA Test Guidelines: 70.7 mg/l

Remarks: Information given is based on data obtained from similar substances.

LC50/96h/Danio rerio (Zebra fish)/Acute toxicity/OECD Test Guideline 203: >100 mg/l

Remarks: Information given is based on data obtained from similar substances.

EC50/10 d/ Corophium volutator (Amphipoda)/PARCOM: 857 mg/l

EC50/ 48h/ Acartia tonsa (Copepod)/PARCOM: 7.4 mg/l

EC50/48h/Daphnia magna (Water Flea) /immobilization/OECD Test Guideline 202: > 100mg/l

Remarks: Information given is based on data obtained from similar substances.

EC50/48h/Daphnia magna (Water Flea) /US EPA TSCA Test Guidelines 1.96 mg/l  
Remarks: Information given is based on data obtained from similar substances.

IC50/72h/Skeletonema costatum (diatom)/ ISO 10253: ca. 27 mg/l

IC50/72h/ Selenastrum capricornutum (Green algae)/Growth inhibition/OECD Test Guideline 201: >100 mg/l  
Remarks: Information given is based on data obtained from similar substances.

**Toxicity to other organisms**

No data available.

**Persistence and degradability:**

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

The polymeric ingredient is not readily biodegradable.

Seawater Shake Flask Method: 28d OECD Test Guideline 306: 13%

**Bioaccumulative potential**

Partition coefficient: n-octanol/water: Not applicable

**Mobility in soil**

Water solubility: completely miscible

Surface tension: No data available.

**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 material is recommended if permitted by regulations. If recycling is not practicable, dispose of in compliance with local regulations.

**Contaminated packaging**

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

**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:**

Eye irritation, Category 2,

**SARA 302 Extremely Hazardous Substances**

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

**SARA 313 Specific Toxic Chemicals 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.P65Warning.ca.gov](http://www.P65Warning.ca.gov).

Acrylamide (79-06-1) < 0.0125 %

Ethylene oxide (75-21-8) < 0.3 PPM

**Notification status:**

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

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

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.

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.

China: All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

Australia: All components of this product are included in the Australian Inventory of Chemical (AICS) or are not required to be listed on the Australian Inventory of Chemical Substances (AICS).

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.

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

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.



**16. OTHER INFORMATION**  
**NFPA HAZARD RATING**

Health: 2  
Fire: 1  
Reactivity: 0

**HMIS Rating:**

Health: 2  
Flammability: 1  
Reactivity: 0

**Training advice:** Read the safety data sheet before using this product.

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