



Solve 151

Safety Data Sheet

Date Issued: 02/15/2021

Date Revised: 06/05/2020

1. IDENTIFICATION

PRODUCT NAME: SOLVE 151

Recommended Use of the chemical and restrictions on use

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

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.

Hazards 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

Polyacrylamide in water-in-oil emulsion

Hazardous components

CHEMICAL NAME	CAS-NO.	CONCENTRATION %
Distillates (petroleum), hydrotreated light	64742-47-8	23 – 27 %
Alcohols, C10-16, ethoxylated	68002-97-1	0 – 2.3 %
Alcohols, C12-16, ethoxylated	68551-12-2	0 – 2.3 %
Alcohols, C12-14, ethoxylated	68439-50-9	0 – 2.3 %

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 a poison control center or doctor immediately. If swallowed DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Skin contact: Remove contaminated clothing and shoes. Wash off with plenty of water. Wash contaminated clothing before reuse. If person feels unwell or symptoms of skin irritation appear, consult a physician.

Eye contact: Rinse immediately with plenty of water for at least 15 minutes. Consult a physician if necessary.

Inhalation: Move 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 Irritation

Hazards Risk of serious damage to eyes.

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 (CO₂), or dry chemical.

Unsuitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and surrounding environment.

Special Hazards arising from the substance or mixture: Cool closed containers exposed to fire with water spray.

Special protective actions for fire-fighters: Wear full protective clothing and self-contained breathing apparatus. Use NIOSH/MSHA approved respiratory protection.

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. Wear suitable protective clothing and gloves. Chemical resistant boots.

Environmental precautions

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

Methods and materials for containment and cleaning up

Danger for slipping. Soak up with inert absorbent material. Sweep up and shovel. After cleaning, flush away traces 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

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

Materials for packaging

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

Material to avoid:

Strong oxidizing agents

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 ³		

Appropriate Engineering controls:

Handle in accordance with good industrial hygiene and safety practice. Wash hands and face before breaks and immediately after handling the product. Avoid contact with skin and eyes. Do not breathe vapour. Ensure that eyewash stations and safety showers are close to workstation location. Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Individual protection measures, such as personal protective equipment

Industrial Hygiene

Wash hands before eating, drinking, or smoking. Keep away from food and drink. Keep away from tobacco products.

Respiratory protection:

Use the indicated respiratory protection if the occupational exposure limit is exceeded.

Hand protection

Glove material: Chemical resistant gloves.

Skin and body protection

Protective clothing. Avoid contact with skin.

Eye protection:

Safety goggles and face-shield

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state:	liquid
Form:	viscous liquid
Color:	white
Odor:	hydrocarbon-like
Odor Threshold:	No data available
pH:	4-6
Freezing point/Melting point:	-18 °C
Initial Boiling Point/Range:	ca. 347 °F
Flash point:	212 °F (closed cup) (Pensky-Martens)
Evaporation rate:	< 1
Flammability (solid, gas):	Not classified as a flammability hazard
Explosive properties	
Lower explosion limit:	No data available
Upper explosion limit:	No data available
Oxidizing properties:	The substance or mixture is not classified as oxidizing.
Vapor Pressure:	Not applicable
Relative vapor density:	No data available
Density:	8.45 lb/gal
Relative Density:	No data available
Bulk density:	1.014 kg/m ³
Solubility in Water:	Limited by viscosity
Partition coefficient:	
n-octanol/water:	No data available
Auto-ignition temperature	No data available
Decomposition temp:	No data available
Viscosity, dynamic:	No data available
Viscosity, kinematic:	> 20.5 mm ² /s (104 °F)
Saturation in air (% vol.)	No data available
Volatile organic content (VOC):	No data available
Surface tension:	Not determined

10. STABILITY AND REACTIVITY

Reactivity

Not classified as a reactivity hazard.

Chemical stability

Possibility of hazardous reactions

Hazardous polymerization does not occur.

Conditions to avoid

No data available.

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon monoxide (CO), Ammonia, Oxides of nitrogen, Carbon dioxide (CO₂)

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. Conclusion Product: LD50/Rat/> 10,000 mg/kg Conclusion: Petroleum distillates 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/>20mg/l Remarks: estimated
Acute inhalation toxicity	Distillates (petroleum), hydrotreated light: LC50/Rat/4 h/>/5.2 mg/l
Acute dermal toxicity	Remarks: Product LD50/Rabbit/> 10,000 mg/kg Remarks Petroleum distillate: LD50/Rabbit/>3,160 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
Serious eye damage/eye irritation	Calculation method Conclusion: Causes serious eye irritation.
Respiratory or skin sensitization	
Skin sensitization	Result: 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

Distillates (petroleum), hydrotreated light:
Conclusion: not mutagenic

Carcinogenicity

Distillates (petroleum), hydrotreated light:
Not classified by IARC or NTP.

Reproductive toxicity
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.

LC50/96h/Lepomis macrochirus (Bluegill sunfish)/Acute toxicity/OECD Test Guideline 203:> 100 mg/l

Remarks: Actual product testing

LC50/96h/Oncorhynchus mykiss (rainbow trout)/Acute toxicity/OECD Test Guideline 203: >100 mg/l

Remarks: Actual product testing

EC50/48h/Daphnia magna (Water Flea)/Immobilization/Calculation method: approximately 24.11 mg/l

Remarks: all components

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

Remarks: similar product

IC50/72 h/Green algae (selenastrum capricornutum)/Growth inhibition/OECD Test Guideline 201: >100 mg/l

Remarks: similar product

Toxicity to other organisms:

Remarks: No data available.

Persistence and degradability:

Biological degradability:

CO2 Evolution Test/OECD Test Guideline 301B:

Because of the high molecular weight of the polymer diffusion through biological membranes is very small. Not readily biodegradable.

Bioaccumulative potential:

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: 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.

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

Packages must be disposed of according to 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

US. Environmental Protection Agency (EPA); Superfund Amendments and Reauthorization Act (SARA) Section 302 Extremely Hazardous Substances as amended by US Federal Register Final rules.

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

While this product does not contain any component CAS numbers directly listed under SARA 313- of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), it does contain ammonia chemical(s) that may be sources per EPA of aqueous ammonia, a reportable chemical. For our customer's use evaluation for reporting purposes we have listed these source chemical(s) below

with their quantities when present at >1%. Please refer to EPA Guidance for Reporting Aqueous Ammonia, EPA 745-R-00-005.

While this product does not contain any component CAS numbers directly listed under SARA 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), it does contain ammonia chemical(s) that may be sources per EPA of aqueous ammonia, a reportable chemical. For our customer's use evaluation for reporting purposes we have listed these source chemical(s) below with their quantities when present at >1%. Please refer to EPA Guidance for Reporting Aqueous Ammonia, EPA 745-R-00-005.

Ammonium sulphate (7783-20-2)

Toxic chemical release substances. 52 FR 21152 (6/4/87). Subject to SARA Title III.

California Proposition 65

WARNING: This product contains a chemical or chemicals known to the State of California to cause cancer, birth defects of other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Acrylamide (79-06-1) < 0.05 %

Ethylene oxide (75-21-8) < 0.2 PPM

Notification status:

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 Substances List (DSL) or are not required to be listed on the Canada Domestic Substance List (DSL).

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

Taiwan: This product's Taiwan Toxic Chemical Substances Control Act Inventory status has NOT been determined.

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