Solve 154

Safety Data Sheet

Date Issued: 11/28/2016
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1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

PRODUCT NAME: SOLVE 154
COMPANY: WaterSolve, LLC, 5031 68th St. S.E. Caledonia, MI 49316, USA
For Product information call 616-575-8693. 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)
Use of the Substance/mixture: Water treatment chemical
Recommended restrictions on use:

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
Eye irritation; Category 2; Causes serious eye irritation.

GHS-Labeling
Signal Word: **WARNING**
Hazard pictograms

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 Anionic polyacrylamide in water-in-oil 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 ï 2.7 %
Alcohols, C12-14, ethoxylated	68439-50-9	0 ï 2.7 %
Alcohols, C12-16, ethoxylated	68551-12-2	0 ï 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:

Remove contaminated clothing and shoes without delay. Wash immediately with plenty of water. If a person feels unwell or symptoms of skin irritation appear, consult a physician. Get medical attention if pain or irritation persists after washing or if signs and symptoms of overexposure appear. Do not reuse contaminated clothing without laundering

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.

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. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special Hazards arising from the substance or mixture: No information available.

Special protective actions for fire-fighters: Firefighters, and others exposed, wear self-contained breathing apparatus. In the event of a fire wear full firefighting protective clothing. Use NIOSH/MSHA approved respiratory protection.

Further information: Prevent fire extinguishing water from contaminating surface water or the ground water system. In the event of fire, 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. Do not flush into surface water or sanitary sewer system.

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
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 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.

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
Storage stability:
Storage temperature: Room temperature
Reason: integrity

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		Vapor	197 ppm 1,200 mg/m^3		
		TWA		200 mg/m³	2006-11-29	CA BC OEL

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

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. Where respiratory protection is required based on use and conditions, NIOSH approved respirators should be used.

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. 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/body protection:
Chemical resistant protective clothing. Chemical resistant boots. Avoid skin contact.

Environmental exposure controls: No data available

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state:	liquid, emulsion
Color:	gray to white
Odor:	ammoniacal
pH:	6-8
Melting Point Range:	-0.4ºC - 32ºF
Freezing point:	ca. 0ºC
Initial boiling point/range:	177-260 ºF
Flash point:	200ºF (closed cup)
Evaporation rate:	similar to water
Explosive properties	
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor pressure:	No data available
Relative Vapor Density:	No data available
Density:	8.68 lb/gal
Bulk density:	1.042 kg/m³
Water solubility (ies):	Completely miscible
Partition coefficient:	
n-octanol/water:	Not applicable
Decomposition temp:	No data available
Saturation in air (% vol.):	No data available
Viscosity: Viscosity, kinematic:	> 20.5 $mm^{2/}s$ (104ºF)
Oxidizing potential:	The substance or mixture is not classified as oxidizing.
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: Stable under normal conditions.

Incompatible materials

Material to avoid: Strong oxidizing agents.

Hazardous decomposition products

Hazardous decomposition Products: Carbon oxides
Ammonia
Nitrogen oxides (NOx)

Thermal decomposition: Note: No data available.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute oral toxicity: Remarks: estimated LD50/Rat >/5,000 mg/kg

Acute oral toxicity: **Distillates (petroleum), hydrotreated light:** LD50/Rat/>5,000 mg/kg

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: Test Guideline OECD 439 Read across (Analogy)
Conclusion: No skin irritation.

Serious eye damage /eye irritation **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: **Distillates (petroleum), hydrotreated light:** Conclusion: No known effect.

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

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. 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. Acute toxicity tests conducted using environmentally representative water.
LC50/ 96hr Fathead minnow (*Pimephales promelas)* / US EPA TSCA Test Guidelines: 21 mg/l
Remarks: Information given is based on data obtained from similar substances.
LC50/ 96hr Rainbow trout (*Oncorhynchus mykiss)*/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 Amphipoda (*Corophium volutator)*/PARCOM: 857 mg/l
EC50/ 48h/ Copepod (*Acartia tonsa)*/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/Green algae (*Selenastrum capricornutum)*/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

Because of the high molecular weight of the polymer diffusion through biological membranes is very small. Bioaccumulation is unlikely.
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.
EPA Hazardous Waste- NO

Contaminated packaging: Packages that cannot be cleaned must be disposed of the same way as the unused product. Dispose of in compliance with local, state and national regulations.

14. TRANSPORT INFORMATION

Land transport

Not classified as dangerous in the meaning of transport regulations.
Store between 5-30ºC.
Protect from frost. Keep away from direct sunlight.

Sea Transport

Not classified as dangerous in the meaning of transport regulations.
Store between 5-30ºC.
Protect from frost. Keep away from direct sunlight.

Air transport
Not classified as dangerous in the meaning of transport regulations.
Store between 5-30ºC.
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 requirement of SARA Title lll, Section 302.
None present
Section 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.
None present
California Proposition 65
Acrylamide (79-06-1) < 0.01 %
Ethylene oxide (75-21-8) < 0.31 PPM
Remarks: This product contains a chemical or chemicals known to the state of California to cause cancer, birth defects or other reproduction 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.

Japan: All components of this product are NOT included on the Japanese (ENCS) inventory.

Korea: All components of this product are NOT included on the Korean (ECL) inventory.

New Zealand: All components of this product are included in the New Zealand Inventory of Chemical Substances (NZloC) or are not required to be listed on the New Zealand Inventory.

Philippines: All components of this product are NOT included on the Philippine (PICCS) inventory.

Taiwan: All of the components of this product are NOT included on the Taiwan Toxic Chemical Substances Control Act Inventory.

16. 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 ï Materials that must be preheated before ignition can occur.

Reactivity 0 ï 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 this product.

DATE REVISED: 11/28/2016

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 userôs 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 userôs 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 ñInternational Air Transport Associationò (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI (ICAO): Technical Instructions by the ñInternational Civil Aviation Organizationò
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