



Solve 136

Safety Data Sheet

Date Issued: 06/29/2020

Date Revised: 06/04/2020

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

PRODUCT NAME: **SOLVE 136**

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+338

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

Cationic polyacrylamide in water-in-oil emulsion

Hazardous components

CHEMICAL NAME	CAS-NO.	CONCENTRATION %
Distillates (petroleum), hydrotreated light	64742-47-8	20 - 24 %
Alcohols, C10-16, ethoxylated	68002-97-1	0 – 2.97 %
Alcohols, C12-16, ethoxylated	68551-12-2	0 – 2.97 %
Alcohols, C12-14, ethoxylated	68439-50-9	0 – 2.97 %

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. 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 before re-use. Get medical attention if irritation develops and persists.

Eye contact: Rinse immediately 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: Serious eye damage/eye irritation

Hazards: Serious eye damage/eye irritation

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, or dry chemical.

Unsuitable extinguishing media: none

Special Hazards arising from the substance or mixture: Fire will produce dense black smoke containing hazardous combustion products (see Section 10). Spills are very slippery when wet.

Special protective actions for fire-fighters: Wear self-contained breathing apparatus and protective suit. Use NIOSH/MSHA approved respiratory protection. For personal protection see Section 8.

Further information: 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. For personal protection refer to Section 8. Use chemical resistant boots.

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. Flush with plenty of water. Spill area should be re-cleaned in case slipperiness remains.

Additional advice

If the product contaminates rivers and lakes or drains inform respective authorities.

7. HANDLING AND STORAGE

Precautions for safe handling: For personal protection see Section 8.

Conditions for safe storage, including any incompatibilities: To avoid product degradation and equipment corrosion, do not use iron, copper or aluminum containers or equipment.

Material to avoid:

Strong oxidizing agent. To avoid product degradation and equipment corrosion, do not use iron, copper or aluminum containers of equipment. Corrodes metals, iron, copper and aluminum.

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 ³		

Appropriate Engineering controls:

Avoid contact with skin, eye and clothing. Do not breathe vapours, aerosols. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

Industrial Hygiene

Handle in accordance with good industrial hygiene and safety practice. 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: Nitrile rubber, 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 skin contact. Protective clothing.

Eye protection:

Tightly fitting safety goggles or face-shield. Ensure that eyewash equipment and safety shower are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state:	liquid
Form:	viscous liquid
Color:	opaque, greenish, to milky white
Odor:	slight hydrocarbon-like
Odor Threshold:	No data available
pH:	3-6 (emulsion in water)
Freezing point/Melting point:	Not applicable
Initial Boiling Point/Range:	212 °F
Flash point:	>200°F (closed cup) (Pensky-Martens) >93 °C (closed cup)
Evaporation rate:	No data available
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:	No data available
Relative vapor density:	Similar to water
Density:	Similar to water
Relative density:	No data available
Solubility in Water:	Limited by viscosity
Partition coefficient:	
n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	
Viscosity, Dynamic:	No data available
Viscosity, kinematic:	>20.5 mm ² /s (104°F)
Surface tension:	Not determined

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 recommended storage conditions.

Incompatible materials: Strong oxidizing agents.

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

Hazardous decomposition products: Carbon monoxide (CO), carbon dioxide (CO₂), Ammonia, oxides of nitrogen, 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	LD50/Rat/4h/ >20mg Remarks: estimated
Acute inhalation toxicity	Distillates (petroleum), hydrotreated light: LC50/Rat/4h/ >5.2 mg/l
Acute dermal toxicity	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	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 vitro:	Distillates (petroleum), hydrotreated light: Conclusion: not mutagenic
Carcinogenicity 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.

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.

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

fresh water

LC50/96h/Fathead minnow (Pimephales promelas)/Short term (acute) aquatic hazard/US EPS TSCA Test Guidelines: 6.6 – 8.8 mg/l

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

IC50/Algae/Growth inhibition/OECD Test Guideline 201:

Due to the cationicity of the polymer, test is not appropriate.

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.

Bioaccumulative potential:

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

Mobility in soil

Water solubility: Limited by viscosity.

Surface tension: No data available

Other adverse effects:

No data available

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 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 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

Acrylamide (79-06-1) < 0.01 %

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.

Other regulations: None

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 I inventory.

Canada: 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).

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 (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 on 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.

16. **OTHER INFORMATION**

NFPA RATING

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.

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