



## Solve 9232

### Safety Data Sheet

**Date Issued:** 06/05/2018

**Date Revised:** 04/10/2018

#### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Solve 9232  
**Company Identification:** WaterSolve, LLC  
5031 68th Street  
Caledonia, Michigan 49316, USA [www.gowatersolve.com](http://www.gowatersolve.com)

**For Product Information:** 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)

#### **Recommended use of the chemical and restrictions on use**

Use of Substance/Mixture: Flocculant

#### 2. HAZARDS IDENTIFICATION

##### **GHS Classification in accordance with 29 CFR 1910.1200**

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

##### **GHS Label element**

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

##### **Other hazards**

None known.

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance/Mixture:** Mixture

##### **Hazardous Components**

Chemical Name	CAS#	Classification	CONCENTRATION %
ALIPHATIC HYDROCARBON	Trade Secret	Flam. Liq. 4; H227 Asp. Tox. 1; H304	>= 20 - <30
ALKOXYLATED ALCOHOL	Trade Secret	Eye Dam. 1; H318	>= 1 - < 1.5
ALCOHOL ALKOXYLATES	Trade Secret	Acute Tox. 4; H302 Eye Dam. 1; H318	>= 1 - < 1.5

Trade Secret Composition- Conceal the Identity + Concentration

#### 4. FIRST AID MEASURES

**General Advice:** No hazards which require special first aid measures.

**If swallowed:** If Swallowed: Call a Poison Center/doctor if you feel unwell. Do not give milk or alcoholic beverages. Never give anything by mouth to a drowsy or unconscious person. If symptoms persist, call a physician.

**In case of Skin Contact:** First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.

**In case of Eye Contact:** Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist.

**If Inhaled:** If breathed in, move person into fresh air. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

**Most important symptoms and effects, both acute and delayed:**

- Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias in persons exposed to this material.
- This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity when deciding whether to induce vomiting.
- Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), lung irritation, confusion, irregular heartbeat, convulsions.

**Notes to physician:** No hazards which require special first aid measures.

5. **FIRE FIGHTING MEASURES**

**Suitable Extinguishing Media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray, foam, carbon dioxide (CO<sub>2</sub>) or dry chemical.

**Unsuitable extinguishing media:** High volume water jet.

**Specific hazards during firefighting:**

Do not allow run-off from firefighting to enter drains or water courses.

**Hazardous combustion products:**

Carbon dioxide (CO<sub>2</sub>), carbon monoxide, Nitrogen oxides (NO<sub>x</sub>), Hydrocarbons

**Specific extinguishing methods:** Product is compatible with standard fire-fighting agents.

**Further information:** Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

**Special Protective Equipment for fire-fighters:**

In the event of fire, wear self-contained breathing apparatus.

6. **ACCIDENTAL RELEASE MEASURES**

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

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Comply with all applicable federal, state, and local regulations.

**Environmental precautions:**

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

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

Keep in suitable, closed containers, for disposal.

7. **HANDLING AND STORAGE**

**ADVICE ON PROTECTION AGAINST FIRE AND EXPLOSION:**

Normal measures for preventive fire protection.

**ADVICE ON SAFE HANDLING:**

Do not eat, drink or smoke when using this product. For personal protection see Section 8. Dispose of rinse water in accordance with local and state and national regulations.

**CONDITIONS FOR SAFE STORAGE:**

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations/working materials must comply with the technological safety standards.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

COMPONENTS	CAS-No.	Value type (form of exposure)	Control parameters/permissible concentration	Basis
Aliphatic Hydrocarbon	Trade Secret	TWA (Mist)	5 mg/m <sup>3</sup>	OSHA Z-1
		TWA	200 mg/m <sup>3</sup> (total hydrocarbon vapor)	ACGIH
		TWA (Mist)	5 mg/m <sup>3</sup>	OSHA P0
		TWA (Mist)	5 mg/m <sup>3</sup>	NIOSH REL
		ST (Mist)	10 mg/m <sup>3</sup>	NIOSH REL

**Engineering measures:**

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

**Personal protective equipment:****Respiratory protection**

No personal respiratory protective equipment normally required.

**Hand Protection**

Remarks: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

**Eye protection**

Wear chemical splash-proof safety goggles if there is a potential for exposure of the eyes to liquid, vapor or mist.

**Skin and body protection**

Wear as appropriate: Impervious clothing, safety shoes. Choose body protections according to the amount and concentration of the dangerous substance at the work place. Wear resistant gloves (consult your safety equipment supplier).

**Hygiene measures:** Wash hands before breaks and at the end of the workday. When using do not eat, drink or smoke.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	viscous
<b>Color:</b>	White
<b>Odor:</b>	Mild, Hydrocarbon-like
<b>Odor Threshold:</b>	No data available
<b>pH:</b>	3-5 , Concentration: 1%, Aqueous solution
<b>Melting point/freezing point:</b>	ca. -15° C
<b>Boiling Point/boiling range:</b>	No data available
<b>Flash point:</b>	Does not flash. Method : Cleveland open cup
<b>Evaporation Rate:</b>	<1 n-Butyl Acetate
<b>Flammability (solid, gas):</b>	No data available
<b>Self-ignition:</b>	> 100 °C
<b>Upper Explosion Limits:</b>	No data available
<b>Lower Explosion limits:</b>	No data available
<b>Vapor Pressure:</b>	<35 hPa
<b>Relative vapor density:</b>	No data available
<b>Relative density:</b>	No data available
<b>Density:</b>	ca. 1.03 g/cm <sup>3</sup>
<b>Solubility in Water:</b>	Soluble
<b>Solubility in other solvents:</b>	No data available
<b>Partition coefficient (n-octanol/water):</b>	No data available

<b>Decomposition temperature:</b>	No data available
<b>Viscosity, dynamic</b>	1,000 – 5,000 mPa.s
<b>Viscosity, kinematic</b>	> 20.5 mm <sup>2</sup> /s (40°C) Based on a similar product formulation.
<b>Oxidizing properties:</b>	No data available

## 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	No decomposition if stored and applied as directed.
<b>Chemical Stability:</b>	Stable under recommended storage conditions.
<b>Possibility of Hazardous reactions:</b>	Product will not undergo hazardous polymerization.
<b>Conditions to avoid:</b>	Heat, flames and sparks
<b>Incompatible Materials:</b>	Acids, strong oxidizing agents, strong reducing agents
<b>Hazardous decomposition products:</b>	Carbon dioxide (CO <sub>2</sub> ), carbon monoxide, nitrogen oxides (NO <sub>x</sub> ), Hydrocarbons

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity:** Not classified based on available information.

### Product:

**Acute oral Toxicity:** LD 50: > 2,000 mg/kg

**Acute dermal Toxicity:** Acute toxicity estimate: > 5,000 mg/kg  
Method: Calculation method

### Components:

#### **ALIPHATIC HYDROCARBON**

**Acute oral toxicity:** LD 50 (Rat): > 5,000 mg/kg  
**Acute inhalation toxicity:** LC 50 (Rat, male and female): >5.28 mg/l  
Exposure time: 4h  
Test atmosphere: vapor  
Method: OECD Test Guideline 403  
Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

**Acute dermal toxicity:** LD50 (Rabbit): > 2,000 mg/kg  
Assessment: No adverse effect has been observed in acute dermal toxicity tests.

### Components:

#### **ALKOXYLATED ALCOHOL:**

**Acute oral toxicity:** LD 50 (Rat): > 2,000 mg/kg  
**Acute inhalation toxicity:** Remarks: No data available  
**Acute dermal toxicity:** LD50 (Rabbit): > 2,000 mg/kg  
Method: OECD Test Guideline 402

#### **ALCOHOL ALKOXYLATES:**

**Acute oral toxicity:** LD 50 (Rat): 1,380 mg.kg

**Skin corrosion/irritation** Not classified based on available information

### **Product:**

Result: Possibly irritating to skin

Result: Repeated exposure may cause skin dryness or cracking.

**Components:**

**ALIPHATIC HYDROCARBON:** Result: Mildly irritating to skin

**ALKOXYLATED ALCOHOL:** Result: Not irritating to skin

**ALCOHOL ALKOXYLATES:** Result: Not irritating to skin

**Serious eye damage/eye irritation**

Not classified based on available information

**Product:**

Result: Possibly irritating to eyes

Remarks: Unlikely to cause eye irritation or injury.

**Components:**

**ALIPHATIC HYDROCARBON:** Result: Mildly irritating to eyes

**ALKOXYLATED ALCOHOL:** Result: Corrosive to eyes

**ALCOHOL ALKOXYLATES:** Result: Risk of serious damage to eyes.

**Respiratory or skin sensitization:**

**Skin sensitization:** Not classified based on available information

**Respiratory sensitization:** Not classified based on available information

**Germ cell mutagenicity:** Not classified based on available information

**Carcinogenicity:** Not classified based on available information

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen by OSHA.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity Not classified based on available information.

STOT – single exposure Not classified based on available information.

STOT – repeated exposure Not classified based on available information.

Aspiration toxicity Not classified based on available information.

**Components:**

**ALIPHATIC HYDROCARBON**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

**Further Information:**

Remarks: No data available.

12. **ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Product:**

**Ecotoxicology Assessment**

**Acute aquatic toxicity:** Acute aquatic toxicity Category 2; Toxic to aquatic life.

**Chronic aquatic toxicity:** Not classified based on available information.

**Components:**

**ALIPHATIC HYDROCARBON**

**Ecotoxicology Assessment**

Acute aquatic toxicity: No toxicity at the limit of solubility

Chronic aquatic toxicity: No toxicity at the limit of solubility

**ALKOXYLATED ALCOHOL**

**Toxicity to fish:**

LC50 (Danio rerio (Zebra Fish): 0.876 mg/l  
Exposure time: 96h  
Test Type: semi-static test  
Method: Directive 67/548/EEC, Annex V, C.1.  
Remarks: Information given is based on data obtained from similar substances.

**Toxicity of daphnia and other  
Aquatic invertebrates:**

EC50 Water flea (Daphnia magna): 0.999 mg/l  
Exposure time: 48h  
Test Type: static test

**Toxicity to Algae:**

EC50 Pseudokirchneriella subcapitata (green algae): 0.41 mg/l  
End point: Growth inhibition  
Exposure time: 72h  
Test Type: static  
Method: OECD Test Guideline 201  
Remarks: Information given is based on data obtained from similar substances.

**Toxicity to fish (Chronic toxicity):** NOEC Lepomis macrochirus (Bluegill sunfish): 0.16 mg/l  
Exposure time: 10 d  
Test Type: flow-through test

**Toxicity to daphnia and other Aquatic**

**Invertebrates (Chronic toxicity):** NOEC Water flea (Daphnia magna): 0.77 mg/l  
End point: Reproduction Test  
Exposure time: 21 d  
Test type: flow-through test  
Remarks: Information given is based on data obtained from similar substances.

**ALCOHOL ALKOXYLATES:**

**Toxicity to fish:** LC50 Fish: >1 – 10 mg/l  
Exposure time: 96 h  
Test Type: static test

**Toxicity to daphnia and other  
Aquatic invertebrates:**

EC50 Daphnia (water flea): > 1 – 10 mg/l  
Exposure time: 48h  
Test type: static test

**Toxicity to daphnia and other  
Aquatic invertebrates (chronic  
Toxicity):**

EC50 Daphnia (water flea): 0.17 mg/l  
Exposure time: 21 d

**Ecotoxicology Assessment**  
**Chronic aquatic toxicity:**

Harmful to aquatic life with long lasting effects.

**Persistence and degradability**

**Product:**

**Biochemical Oxygen Demand (BOD):** Biochemical oxygen demand within 5 days  
383,000 mg/l

**Chemical Oxygen Demand (COD):** 1,930,000 mg/l  
Method: Chemical Oxygen demand

**Components:**

**ALKOXYLATED ALCOHOL**

**Biodegradability:**

Result: Readily biodegradable  
Biodegradation: 95%  
Exposure time: 28 d  
Method: OECD Test Guideline 301F

**ALCOHOL ALKOXYLATES**

**Biodegradability:**

Result: Readily biodegradable

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects:**

**Product:**

**Additional ecological information:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

**13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

**Waste from residues:** The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. Dispose of in accordance with all applicable local, state, and federal regulations.

**Contaminated packaging:** Empty remaining contents. Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

**14. TRANSPORT INFORMATION**

**International Transport Regulations**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT /LTD. QTY.
U.S. DOT -ROAD					Not dangerous goods
U.S. DOT - RAIL					Not dangerous goods
U.S. DOT – INLAND WATERWAYS					Not dangerous goods
TRANSPORT CANADA - ROAD					Not dangerous goods
TRANSPORT CANADA - RAIL					Not dangerous goods

<b>INTERNATIONAL MARITIME DANGEROUS GOODS</b>	Not dangerous goods
<b>INTERNATIONAL AIR TRANSPORT ASSOC. - CARGO</b>	Not dangerous goods
<b>INTERNATIONAL AIR TRANSPORT ASSOC. - PASSENGER</b>	Not dangerous goods
<b>MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES</b>	Not dangerous goods

\*ORM = ORM-D, CBL=COMBUSTIBLE LIQUID

Marine pollutant		No
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Dangerous goods description (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for description that are specific to the shipment.

## 15. REGULATORY INFORMATION

### **EPCRA – Emergency Planning and Community Right-to-Know Act**

#### **SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards:** No SARA HAZARDS

**SARA 313** 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 Prop. 65-**Proposition 65 warnings are not required for this product based on the results of a risk assessment.

#### **The components of this product are reported in the following inventories:**

TSCA: On TSCA Inventory  
 DSL: This product contains one or more components that are not on the Canadian DSL and have annual quantity limits.  
 AICS: On the inventory, or in compliance with the inventory.  
 ENCS: Not in compliance with the inventory.  
 KECI: Not in compliance with the inventory  
 PICCS: Not in compliance with the inventory.  
 IECSC: On the inventory, or in compliance with the inventory.  
 TCSI: Not in compliance with the inventory.

TSCA List: No substances are subject to a Significant New User Rule.

#### **Inventories:**

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

## 16. **OTHER INFORMATION**

### **Full text of H-Statements**

H227 Combustible liquid  
 H302 Harmful if swallowed  
 H304 May be fatal if swallowed and enters airways.  
 H318 Causes serious eye damage.

### **Full text of other abbreviations**

Acute Tox. Acute toxicity  
 Asp. Tox. Aspiration hazard  
 Eye Dam. Serious eye damage  
 Flam. Liq. Flammable liquids



**DATE ISSUED: 06/05/2017**  
**DATE REVISED: 04/10/2018**

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  
STEL: Short-term exposure limit  
SDS Safety Data Sheet  
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  
(WAF): water-accommodated fraction