



Solve 9233

Safety Data Sheet

Date Issued: 06/01/2017

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1. **PRODUCT AND COMPANY IDENTIFICATION**

Product Name: **Solve 9233**

Company Identification: WaterSolve, LLC
5031 68th Street
Caledonia, Michigan 49316, USA 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: **Flocculating agent**

29 CFR 1910.1200 (OSHA HazCom 2012)

2. **HAZARDS IDENTIFICATION**

GHS Classification

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom2012).

GHS Label element

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom2012).

Other hazards

None known.

3. **COMPOSITION/INFORMATION ON INGREDIENTS**

Substance/Mixture: Mixture

Hazardous Components

Chemical Name	CAS#	Classification	CONCENTRATION %
ALKOXYLATED ALCOHOL	254504001-6264	Eye Irrit. 2A; H319	>= 1.50 - <5.00
Alkane, C16-20- Iso	254504001-6266	Asp. Tox. 1; H304	>=20.00 - < 30.00

Trade Secret Composition- Conceal the Identity + Concentration

4. **FIRST AID MEASURES**

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

If swallowed: 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. Remove contaminated clothing and shoes without delay. It is recommended that exposed areas be cleaned by washing with soap and water. Do not reuse contaminated clothing without laundering. Get medical attention if irritation develops or persists.

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 Inhalation: 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:

- Causes skin irritation.
- May cause drowsiness or dizziness.
- 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).

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 or dry chemical.

Specific hazards during firefighting:

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

Hazardous combustion products:

Carbon dioxide and carbon monoxide, Nitrogen oxides (NO_x)

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

Keep containers cool by spraying with water if exposed to fire.

Further information: When product is wet it causes a danger for slipping. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special Protective Equipment for fire-fighters:

Firefighters, and others exposed, wear self-contained breathing apparatus and protective suit.

6. **ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Ensure adequate ventilation. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Material can create slippery conditions.

Environmental precautions:

Do not let product enter drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities. Do not flush into surface water or sanitary sewer system. Do not allow contact with soil, surface or ground water.

Methods and materials for containment and cleaning up:

Keep in suitable, closed containers, for disposal. Soak up with inert absorbent and non-combustible absorbent material, (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Other information:

Comply with all applicable federal, state and local regulations.

7. **HANDLING AND STORAGE**

ADVICE ON SAFE HANDLING:

This material is slippery when wet. 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. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

CONDITIONS FOR SAFE STORAGE:

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

Materials to avoid: No materials to be especially mentioned.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

COMPONENTS	CAS-No.	Value type (form of exposure)	Control parameters/permissible concentration	Basis
DISTILLATES (PETROLEUM) Hydrotreated light	64742-46-7	TWA	200 mg/m ³ Non-aerosol (as total hydrocarbon vapor)	ACGIH
		REL	100 mg/m ³	NIOSH/GUIDE

Engineering measures:

General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment:

No personal respiratory protective equipment normally required.

Eye protection

Wear tightly fitting splash-proof safety goggles or face-shield if there is a potential for exposure of the eyes to liquid, vapor or mist. Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and body protection

Wear resistant gloves and appropriate impervious clothing, safety shoes. Choose body protections according to the amount and concentration of the dangerous substances at the work place. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.

Hygiene measures: General industrial hygiene practice. Wash hands before breaks and at the end of the workday. When using do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	liquid
Color:	White
Odor:	Hydrocarbon-like
pH:	(ca.) 3.7 , Concentration: 10 g/l (20° C)
Melting point/freezing point:	5 °F / -15°C
Boiling Point boiling range:	> 208°F/98°C
Flash point:	> 212°F/ >100°C Method : Cleveland open cup
Evaporation Rate:	<1 n-Butyl Acetate
Flammability (solid, gas):	No data available
Explosive properties Upper Limits:	7% (V) Calculated Explosive Limit
Lower limits:	0.6% (V) Calculated Explosive Limit
Vapor Pressure:	<35 hPa (20°C)
Relative vapor density:	No data available
Relative density:	No data available
Density:	ca. 1.03 g/cm ³ (20°C)
Solubility in Water:	Soluble
Solubility in other solvents:	No data available
Partition coefficient (n-octanol/water):	No data available
Auto-ignition temperature:	> 100°C
Thermal decomposition:	No data available
Viscosity, dynamic	< 4,000 mPa.s @ (20°C)
Viscosity, kinematic	> 20.5 mm ² /s @ (40°C)
Oxidizing properties:	No data available

10. **STABILITY AND REACTIVITY**

Reactivity: No decompositions if stored and applied as directed.
Chemical Stability: Stable under recommended storage conditions.
Possibility of Hazardous reactions: Product will not undergo hazardous polymerization.
Conditions to avoid: Keep away from heat, flames and sparks and other ignition sources.
Incompatible Materials: Acids, strong oxidizers agents
Hazardous decomposition products: Carbon dioxide, carbon monoxide, nitrogen oxides

11. **TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure: Inhalation, skin absorption, skin contact, eye contact, ingestion

Acute toxicity: Not classified based on available information.

Product:

Acute oral Toxicity: LD 50 (Mouse): > 2,000 mg/kg

Components:

Alkanes, C16-20-iso-:

Acute oral toxicity:

LD 50 (Rat, male and female): > 10,000 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity:

LD50 (Rabbit, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402 GLP: yes

Assessment:

Not classified as acutely toxic by dermal absorption under GHS.

Components:

ALKOXYLATED ALCOHOL:

Acute oral toxicity:

LD 50 (Rat): 2,000 mg/kg Method: OECD Test Guideline 401
No adverse effect has been observed in acute oral toxicity tests.

Assessment:

Acute inhalation toxicity:

Remarks: No data available.

Acute dermal toxicity:

LD50 (Rabbit, male and female): 2,000 mg/kg
Method: OECD Test Guideline 402

Assessment:

Not classified as acutely toxic by dermal absorption under GHS.

Skin corrosion/irritation:

Causes skin irritation.

Components:

Alkanes, C16-20-iso-:

Species:

Rabbit

Result:

Slightly irritating to skin. Method: OECD Test Guideline 404
GLP: yes

ALKOXYLATED ALCOHOL:

Result:

Not irritating to skin

Serious eye damage/eye irritation:

Not classified based on available information

Components:

Alkanes, C16-20-iso-:

Result:

Species Rabbit Method: OECD Test Guideline 405
Not irritating to eyes GLP: no

ALKOXYLATED ALCOHOL:

Result:

Corrosive to eyes

Respiratory or skin sensitization:

Skin sensitization:

Respiratory sensitization:

Not classified based on available information

Not classified based on available information

Components:

Alkanes, C16-20-iso-:

Test type:

Assessment:

Maximisation Test (GPMT) Species: Guinea pig

Did not cause sensitization on laboratory animals.

Method: OECD Test Guideline 406

Germ cell mutagenicity:

Not classified based on available information

Components:

Alkanes, C16-20-iso-:

Genotoxicity in vitro:

Metabolic activation:

Test type: Ames test Test Species: Salmonella typhimurium
with and without metabolic activation

Method: OECD Test Guideline 471

Negative GLP: yes

Result:

Test type: In vitro mammalian cell gene mutation test

Species: mouse lymphoma cells

with and without metabolic activation

Method: OECD Test Guideline 476

Negative GLP: yes

Metabolic activation:

Result:

Test type: Chromosome aberration test in vitro

Species: Human lymphocytes

with and without metabolic activation

Method: OECD Test Guideline 473

Negative GLP: yes

Metabolic activation:

Result:

Carcinogenicity:

Not classified based on available information

Reproductive toxicity:

Not classified based on available information

STOT – single exposure:

May cause drowsiness or dizziness.

STOT – repeated exposure:

Not classified based on available information

Aspiration toxicity:

Not classified based on available information

Product:

No aspiration toxicity classification

Components:

Alkanes, C16-20-iso-:

Further information

Product:

May be fatal if swallowed and enters airways.

No data available

Carcinogenicity:

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 IARC.

OSHA:

No component of this product presents at levels greater than or equal to 0.1 % is identified as carcinogen or potential 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.

12. **ECOLOGICAL INFORMATION**

Ecotoxicity

Product:

Toxicity to fish: LC50 fathead minnow (*Pimephales promelas*): 10.6 mg/l
Exposure time: 96h Method: OECD Test Guideline 203 GLP: no

Toxicity of daphnia and other

Aquatic invertebrates: EC50 Water flea (*Daphnia magna*): > 10 mg/l
Exposure time: 48hr.
Method: OECD Test Guideline 202

Ecotoxicology Assessment

Acute aquatic toxicity:

Acute aquatic toxicity Category 3; Harmful to aquatic life.

Chronic aquatic toxicity:

Chronic aquatic toxicity Category 2;
Toxic to aquatic life with long lasting effects.

Components:

ALKANES, C16-20-ISO-:

Toxicity to fish: LC 50 Zebra fish (*Danio rerio*): > 0.026 mg/l
Exposure time: 96hr. Test Method: semi-static test
Method: Directive 67/548/EEC, Annex V, C.1.
Remarks: No toxicity at the limit of solubility.

Toxicity of daphnia and other

Aquatic invertebrates: EL 50 Water flea (*Daphnia magna*): > 0.077 mg/l
Exposure time: 48hr. Test Method: static test
Method: Directive 67/548/EEC, Annex V, C.2.
Remarks: No toxicity at the limit of solubility.

Toxicity to Algae:

ErC50 *Scenedesmus subspicatus* (*Desmodesmus Subspicatus*):
> 0.021 mg/l Exposure time: 72hr. Test Method: static test
Method: Directive 67/548/EEC, Annex V, C.3. GLP: yes
Remarks: No toxicity at the limit of solubility.

NOEC *Scenedesmus subspicatus* (*Desmodesmus Subspicatus*):
> 0.021 mg/l Exposure time: 72hr. Test Method: static test
Method: Directive 67/548/EEC, Annex V, C.3. GLP: yes
Remarks: No toxicity at the limit of solubility.

Toxicity to daphnia and other Aquatic invertebrates (Chronic toxicity):

NOEC water flea (*Daphnia magna*): 100 mg/l Exposure time: 21 d
Test type: semi-static test Analytical monitoring: yes
Method: OECD Test Guideline 211 GLP: yes

Toxicity to bacteria:

EC50 (*Pseudomonas putida*): >2.0 mg/l Exposure time: 5.25h
Test type: Static GLP: yes

ALKOXYLATED ALCOHOL:

Toxicity to fish: LC50 Zebra Fish (*Danio rerio*): 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 Daphnia Water flea (*Daphnia magna*): 0.999 mg/l
Exposure time: 48h Test Type: static test

Toxicity to Algae:

EC50 green algae (*Pseudokirchneriella subcapitata*): 0.41mg/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 Bluegill sunfish (*Lepomis macrochirus*): 0.16 mg/l
Exposure time: 10 d Test Type: flow-through test

Toxicity of daphnia and other Aquatic

Invertebrates (Chronic toxicity): NOEC water flea (*Daphnia magna*): 0.77mg/l
Exposure time: 21 d End point: Reproduction Test
Test type: flow-through test

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

Persistence and degradability

Product:

Biochemical Oxygen Demand (BOD): Biochemical oxygen demand 240 mg/l
Chemical Oxygen Demand (COD): 1,160 mg/l Method: Chemical Oxygen demand

Components:

Alkanes, C16-20-iso-:

Biodegradability: aerobic
Inoculum: activated sludge
Theoretical oxygen demand /Result: Not readily biodegradable.
Biodegradation: 32% / Exposure time: 28d
Remarks: Not readily biodegradable. Inherently biodegradable

ALKOXYLATED ALCOHOL:

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

Bioaccumulative potential

Components:

Alkanes, C16-20-iso-:

Partition coefficient: n-octanol/water:log Pow 9.5 ó 10.1 (26°C) /Method: OECD Test Guideline 117

Mobility in soil

Components:

No data available

Other adverse effects:

No data available

Product:

Additional ecological information: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

13. **DISPOSAL CONSIDERATIONS**

Disposal methods

General Advice: 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. 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
TRANSPORT CANADA – INLAND WATERWAYS	Not dangerous goods
INTERNATIONAL MARITIME DANGEROUS GOODS	Not dangerous goods
INTERNATIONAL AIR TRANSPORT ASSOC. - CARGO	Not dangerous goods
INTERNATIONAL AIR TRANSPORT ASSOC. - PASSENGER	Not dangerous goods
MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES	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**

SARA 311/312 Hazards: Acute Health Hazard

SARA 313 Components

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 of the following components listed on the Canadian DSL and have annual quantity limits.
AICS:	On the inventory, or in compliance with the inventory.
AUSTR:	On the inventory, or in compliance with the inventory.
ENCS:	Not in compliance with the inventory.
KECL:	On the inventory, or in compliance with the inventory.
PHIL:	Not in compliance with the inventory.
IECSC:	On the inventory, or in compliance with the inventory.

Inventories:

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

Registration: Trade Secret

Chemical Name	IDENTIFICATION NUMBER
Alkane, C16-20-Iso	254504001-6266
ALKOXYLATED ALCOHOL	254504001-6264

16. OTHER INFORMATION

Full text of H-Statements referred to under Sections 2 and 3.

H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.

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DATE REVISED: 06/01/2017

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