



Solve 9423

Safety Data Sheet

Date Issued: 01/25/2016

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1. **PRODUCT AND COMPANY IDENTIFICATION**

Product Name: Solve 9423

Company Identification: WaterSolve, LLC 5031 68th Street Caledonia, Michigan 49316, USA
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)

29 CFR 1910.1200 (OSHA HazCom 2012)

Recommended use of the chemical and restrictions on use

Use of the Substance/Mixture: Flocculating agent

2. **HAZARDS IDENTIFICATION**

GHS CLASSIFICATION

Combustible Dust

GHS Label element

Hazard pictograms:

Signal word: Warning

Hazard Statements: May form combustible dust concentrations in air.

Other hazards: None known

3. **COMPOSITION/INFORMATION ON INGREDIENTS**

Substance/Mixture: Mixture

Hazardous components

CHEMICAL NAME	CAS-No.	CLASSIFICATION	CONCENTRATION (%)
AMIDE	254504001-5518	Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)	> = 10.00 - < 15.00
ORGANIC ACID	254504001-6297	Eye Irrit. 2A; H319	> = 1.50 - < 5.00

Trade Secret Composition – conceal identity + concentration

4. **FIRST AID MEASURES**

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

If swallowed: IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Do not give milk or alcoholic beverages. Never give anything by mouth to a drowsy or unconscious person. If possible, do not leave individual unattended. 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: Move to fresh air. 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:

- 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), cough, headache, shortness of breath, lung irritation, drowsiness, confusion, dizziness.

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.

Unsuitable extinguishing media: High volume water jet

Specific hazards during firefighting: Organic dusts at sufficient concentration can form explosive mixtures in air. Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products:

Carbon dioxide and carbon monoxide, Nitrogen oxides (NO_x), acid vapors, ammonia, sodium oxides, sulfur oxides

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

Further information: Standard procedure for chemical fires. 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, state, federal, national or international regulations.

Special Protective Equipment for fire-fighters:

In the event of fire, firefighters, and others exposed, wear self-contained breathing apparatus and protective suit. Wear full firefighting protective clothing. Use NIOSH/MSHA approved respiratory protection.

6. **ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures:

Avoid dust formation. Avoid breathing dust. 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. Comply with all federal, state, national, international 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. 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:

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers, for disposal.

Other information: Comply with all applicable federal, state, national and local regulations.

7. **HANDLING AND STORAGE**

ADVICE ON SAFE HANDLING:

Avoid dust formation. Smoking, eating and drinking should be prohibited in the application area. Container hazardous when empty. Provide sufficient air exchange and /or exhaust in work rooms. Do not breathe vapours/dust. 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, state, federal, national and international regulations.

CONDITIONS FOR SAFE STORAGE:

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully tightly closed and resealed and kept upright to prevent leakage. Store in a dry and well-ventilated place. No smoking. Keep away from food and drink. Observe label precautions. Electrical installations/working materials must comply with the technological safety standards. Store in original container in a cool, dry ventilated area.

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

Components	CAS-No.	Value type (Form of exposure)	Control parameters/Permissible concentration	Basis
AMIDE	254504001-5518	TWA	10 mg/m ³ Total particulate	WEEL
COCO DIETHANOLAMIDE	68603-42-9	ST ESL	100 µg/m ³	TX ESL
		AN ESL	10 µg/m ³	TX ESL

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. Provide appropriate exhaust ventilation at places where dust is formed. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. Avoid contact with skin and eyes. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment**Respiratory protection:**

In case of vapor formation use a respirator with an approved filter. A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection:

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

Eye protection

Safety glasses. Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and body protection

Wear as appropriate: safety shoes. Dust impervious protective suit. Choose body protections according to the amount and concentration of the dangerous substances at the work place. Wear resistant gloves (consult with your safety equipment supplier). Launder clothing before reuse. Discard gloves that show tears, pinholes, or signs of wear.

Hygiene measures: Avoid breathing dust. 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

Appearance:	granular
Physical state:	solid
Color:	white, light yellow
Odor:	amine-like
Odor threshold:	No data available
pH:	7, Concentration: 10 g/l
Melting point/freezing point:	Not applicable
Boiling Point boiling range:	Not applicable
Flash point:	Not applicable
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper explosion limit:	No data applicable
Lower explosion limit:	30,000 mg/m ³
Vapour pressure:	< 0.02 hPa
Relative vapour Density:	No data available

Relative density:	No data available
Density:	ca. 0.72 g/cm ³
Bulk Density:	600 kg/m ³
Solubility in Water:	Slightly soluble
Solubility in other solvents:	No data available
Partition coefficient: n- Octanol/water:	No data available
Thermal decomposition:	> 150 °C
Viscosity, dynamic	No data available
Viscosity, kinematic:	No data available
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:	Heat, flames and sparks. Keep away from heat, flames, sparks and other ignition sources. Exposure to moisture
Incompatible Materials:	Acids, Alkali metals, alkaline earth metals, aluminum, Chlorine, metals, magnesium, nitrates, oxidizers agents, strong bases, strong reducing agents
Hazardous decomposition products:	acid vapors, carbon dioxide and carbon monoxide, nitrogen oxides, ammonia

11. **TOXICOLOGICAL INFORMATION**

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

Acute toxicity: Not classified based on available information.

Product:

Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg

Components:

ORGANIC ACID:

Acute oral toxicity:

LD50 (Rat): 3 g/kg

Skin corrosion/irritation:

Not classified based on available information.

Product:

Result: Not irritating to skin

Components:

AMIDE:

Result: Not irritating to skin

ORGANIC ACID:

Result: Slightly irritating to skin

Serious eye damage/eye irritation:

Not classified based on available information.

Product:

Result: Mildly irritating to eyes

Remarks: Unlikely to cause eye irritation or injury. Product dust may be irritating to eyes, skin and respiratory system.

Components:

AMIDE:

Result: Not irritating to eyes

ORGANIC ACID:

Result: Severely irritating to eyes

Respiratory or skin sensitization:

Skin sensitization:

Not classified based on available information

Respiratory sensitization:

Not classified based on available information.

Product:

Species: Guinea pig Method: OECD Test Guideline 406
Assessment: Did not cause sensitization on laboratory animals.

Germ cell mutagenicity: Not classified based on available information.

Components:

AMIDE:

Genotoxicity in vitro:

Test Type: Ames test Result: Negative

Carcinogenicity:

Not classified based on available information

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

Product:

No aspiration toxicity classification

Further information

Product:

Remarks: No data available

Carcinogenicity:

IARC:

Group 2B: Possibly carcinogenic to humans
COCO DIETHANOLAMIDE 68603-42-9

OSHA:

No component of this product present at levels greater than or equal to 0.1% is identified as a 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 Zebra fish (Danio rerio): > 1- 10 mg/l
Exposure time: 96h Method: OECD Test Guideline 203
Remarks: Based on a similar product formulation.

LC50 Fathead minnow (Pimephales promelas): 3.3 mg/l
Exposure time: 96h

LC50 Rainbow trout (Oncorhynchus mykiss): 4.56 mg/l
Exposure time: 96h Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates:

EC50 Water flea (Daphnia magna): ca. 35 mg/l
Exposure time: 48h Method: OECD Test Guideline 202

Toxicity to bacteria:

IC50 Bacteria: 755 mg/l Exposure time: 15 min

Components:

AMIDE:

Toxicity to fish:

LC50 Golden orfe (Leuciscus idus): > 6,810 mg/l
Exposure time: 96hr.

LC50 Guppy (Poecilia reticulata): 17,500 mg/l
Exposure time: 96h

Toxicity to daphnia and other aquatic invertebrates: EC50 Water flea (Daphnia magna): 3,910 mg/l
Exposure time: 48h Method: Static

ORGANIC ACID:

Toxicity to fish: LC50 Goldfish (Carassius auratus): 440-706 mg/l
Exposure time: 96h

Persistence and degradability:

Product:

Biodegradability: Readily biodegradable

Physico-chemical removability: Remarks: At natural pHs (>6) the product degrades due to hydrolysis to more than 70% in 28 days. The hydrolysis products are not harmful to aquatic organisms.

Components:

AMIDE:

Biodegradability: Remarks: Expected to be ultimately biodegradable

Bioaccumulative potential:

Components:

AMIDE:

Bioaccumulation:

Species: Green algae (Chlorella fusca vacuolata) Bioconcentration factor (BCF): 11,700

Exposure time: 24h Concentration: 0.05 mg/l Method: Static

Partition coefficient: n-

Octanol/water: log Pow: -2.11

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. **Toxic 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. Send to a licensed waste management company. Dispose of in accordance with all applicable local, state, national and international, 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

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

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ	Calculated product RQ (lbs)
DIETHANOLAMIDE	111-42-2	100	186915.88785

SARA 311/312 Hazards: Fire Hazard

SARA 313

Component(s) 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: All components of this product are on the Canadian DSL.
 AUSTR: On the inventory, or in compliance with the inventory.
 ENCS: On the inventory, or in compliance with the inventory.
 KECL: On the inventory, or in compliance with the inventory.
 PHIL: On the inventory, or 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), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

Registration: Trade Secret

Chemical Name	Identification number
AMIDE	254504001-5518
ORGANIC ACID	254504001-6297

16. **OTHER INFORMATION**

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

H319 Causes serious eye irritation.

H401 Toxic to aquatic life.

DATE ISSUED: 01/25/2016 DATE REVISED: 01/25/2016

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 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:

AICS: Australian Inventory of Chemical Substances
 ASTM: American Society for the Testing of Materials
 ACGIH: American Conference of Industrial Hygienists
 bw: Body Weight
 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
 DIN: Standard of the German Institute for Standardization
 DSL: Domestic Substances List (Canada)
 ECx: Concentration associated with x% response
 EmS: Emergency Schedule
 ENCS: Existing and New Chemical Substances
 ErCx: Concentration associated with x% growth rate response
 ERG: Emergency Response Guide
 FG: Food grade
 FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act
 GHS: Globally Harmonized System of Classification and Labeling of Chemicals
 GLP: Good laboratory practice
 H-statement: Hazard Statement
 HMIRC: Hazardous Materials Information Review Commission
 HMIS: Hazardous Materials Identification System
 IARC: International Agency for Research on Cancer
 IATA: International Air Transport Association
 IATA-DGR: Dangerous Goods Regulation by the International Air Transport Association (IATA)
 IBC: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
 IC50: Half maximal inhibitory concentration
 ICAO: International Civil Aviation Organization
 ICAO-TI (ICAO): Technical Instructions by the International Civil Aviation Organization
 IECS: Inventory of Existing Chemical Substances in China
 IMDG: International Maritime Code for Dangerous Goods
 IMO: International Maritime Organization
 ISHL: Industrial Safety and Health Law (Japan)
 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
 KECI: Korea Existing Chemicals Inventory
 MARPOL: International Convention for the Prevention of Pollution from Ships
 MSHA: Mine Safety and Health Administration
 n.o.s.: Not otherwise Specified
 NFPA: National Fire Protection Association
 NO(A)EC: No Observable Effect Loading Rate
 NO(A)EL: No Observable (Adverse) Effect Level
 NTP: National Toxicology Program
 NIOSH: National Institute for Occupational Safety and Health
 NOELR: No Observable Effect Loading Rate
 NZIOC: New Zealand Inventory of Chemicals
 OECD: Organization for Economic Co-operation and Development
 OPPTS: Office of Chemical Safety and Pollution Prevention
 OEL: Occupational Exposure Limit
 OSHA: Occupational Safety and Health Administration
 P-Statement: Precautionary Statement
 PBT: Persistent, Bioaccumulative and Toxic
 PICCS: Philippines Inventory of Chemicals and Chemical Substances
 PMRA: Health Canada Pest Management Regulatory Agency
 PPE: Personal Protective Equipment
 Q SAR: (Quantitative) Structure Activity Relationship
 RCRA: Resource Conservation and Recovery Act
 REACH: Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals
 RQ: Reportable Quantity
 RTK: Right to Know
 SADT: Self Accelerating Decomposition Temperature
 SARA: Superfund Amendments and Reauthorization Act
 STEL: Short-term exposure limit
 SDS: Safety Data Sheet
 STOT: Specific Target Organ Toxicity
 TCSI: Taiwan Chemical Substance Inventory
 TSCA: Toxic Substances Control Act (United States)
 TLV: Threshold Limit Value
 TWA: Time-weighted average
 UN: United Nations
 UNRTDG: United Nations Recommendations on the Transport of Dangerous Goods
 vPvB: Very Persistent and Very Bioaccumulative
 WEL: Workplace Exposure Level
 WHMIS: Workplace Hazardous Materials Information System
 (WAF): water-accommodated fraction