



Solve 7109

Safety Data Sheet

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **SOLVE 7109**
COMPANY: WaterSolve, LLC, 5031 68th Street Caledonia, MI 49316, USA
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
Recommended use (RU); No information available
Uses advised against: No information available.

Product is certified to NSF/ANSI Standard 60 MUL=10 mgL

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status: This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS).

GHS Label elements, including precautionary statements.

The product contains no substances which at their given concentration, are considered to be hazardous to health.

EMERGENCY OVERVIEW

Physical State	Color	Appearance	Odor
Liquid	Yellow to amber	Clear	Amine

Other information: Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	WEIGHT
Polyquarternaryamine (Epichlorohydrin-DMA Copolymer)	42751-79-1	~50

If CAS number is proprietary, the specific chemical identity and percentage of composition has been withheld as a trade secret.

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Eye Contact: Immediately flush eyes for with plenty of water for at least 15 minutes holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential to achieve maximum effectiveness. Get medical attention if irritation develops and persists.

Ingestion: DO NOT induce vomiting. If vomiting should occur spontaneously, keep airway clear. Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Wash skin immediately with plenty of water and soap for at least 15 minutes. Do not reuse contaminated clothing or shoes without laundering. Get medical attention if pain of irritation persists after washing or if signs and symptoms of overexposure appear.

Inhalation: Move to fresh air and watch for delayed reaction. Give artificial respiration if breathing stops and get medical attention. If breathing is difficult, give oxygen. Call a physician immediately.

Most important symptoms and effects, both acute and delayed

Acute effects: May result in mild irritation of a short-term nature for the skin and eyes.

Chronic effects: Prolonged or repeated skin exposure may cause dermatitis.

Indication of any immediate medical attention and special treatment needed

Note to physicians: Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

This material is not expected to burn unless heated to dryness. Use extinguishing agent suitable for type of surrounding fire: water, foam, carbon dioxide or dry chemical.

Extinguishing media which must not be used for safety reasons: No information available

Special hazards arising from the substance or mixture:

Special Hazards:

Thermal decomposition (as may be experienced in a fire) may produce hydrogen chloride gas or may liberate oxides of nitrogen and carbon. Keep containers cool by spraying with water, if exposed to fire. Spills may produce slippery and could present a physical hazard for firemen.

Advice for firefighters

Firefighters should wear full protective clothing and positive pressure self-contained breathing apparatus when fighting fires near chemicals. Cool exposed containers with water spray after extinguishing fire.

Explosion data:

Sensitivity to Mechanical Impact: None

Sensitivity to Static Discharge: None

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions:

Wear suitable protective clothing and gloves.

Environmental precautions:

Do not permit run-off to get into sewers or surface waterways.

Methods and material for containment and cleaning up:

Methods for containment: Prevent further leakage or spillage if safe to do so. Dike to collect large liquid spills.

Methods: for cleaning up:

Clean up spill immediately using inert absorbent materials such as clays, sand, earth or other commercially available dry sweeping compound. Persons performing cleanup work should wear protective equipment and clothing. Dike area around spill immediately to prevent spreading. Avoid runoff into storm sewers and ditches that lead to waterways. Spills of solution are extremely slippery so all residue must be removed promptly. If slippery conditions persist, apply additional dry sweeping compound. Following containment, large spills should be pumped into salvage tanks.

7. HANDLING AND STORAGE

Personal Precautionary statements: Wear suitable protective clothing and gloves.

Advice on safe handling

Keep container closed when not in use. Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, gloves and protective clothing when handling. Wash thoroughly with soap and water after handling. Take off contaminated clothing and wash before reuse. Use with adequate ventilation and employ respiratory protection where mist or spray may be generated. Ensure that eyewash stations and safety showers are close to the workstation location.

Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep container tightly closed when not in use. Store in a cool, dry and well ventilated area. Store at 5-30°C (41-86°F) in original closed containers. Avoid storage temperatures below freezing, since product may stratify. Changes in temperature create air pressure changes inside drums. Use proper precaution in unscrewing plug and/or opening container.

Incompatible products

Strong oxidizers. Contact with copper, copper alloys, aluminum, mild steel or iron may cause corrosion/degradation.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls: Local exhaust ventilation as necessary to maintain exposures to within applicable limits. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details. If there are no applicable or established exposure limit requirements or guidelines, general ventilation should be sufficient. See Section 3 for more information.

Individual protection measures, such as personal protective equipment

Respiratory protection: Under most conditions, use adequate general ventilation and protective equipment since volatility and toxicity are very low. If significant vapors, mists or aerosols are present, use NIOSH approved respirator (ANSI Z882.1980) or equivalent that is equipped with a dust/mist cartridge.

Eye/Face Protection: Wear chemical splash goggles or safety glasses with side shields. Wear a face shield if the possibility of material splashing or spraying exists. Do not wear contact lenses when working with chemicals. Eyewash and safety shower stations in the work area are recommended.

Hand protection: Rubber gloves.

Skin and body protection: While there is a possibility of skin contact, use the following protective equipment such as rubber gloves and boots that are impervious to liquid material should be worn.

Other personal protection data: Eyewash fountains and safety showers must be easily accessible. Avoid contamination of food, beverage or smoking materials. If clothing is contaminated, wash skin and launder clothing. After handling material and before eating, drinking or smoking, wash face and hands thoroughly with soap and water.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state: Liquid

Color: Yellow to amber

Appearance: clear

Odor: amine

<u>Property</u>	Values	Remarks/Method
pH:	5.0 ó 6.5	as is
Melting Point and Freezing:	(-7°C) to 0°C / 19.4 to 32 °F	No information available
Boiling Point/Boiling range:	>100°C / 212 °F	No information available
Flash point:	>100°C / 212°F @ 760 mm Hg	No information available
Evaporation Rate:	Same as water	No information available
Flammability (solid, gas):	No information available	No information available
Flammability Limit In Air		
Upper limit:	Not applicable	No information available

Lower limit:	Not applicable	No information available
<u>Property</u>	Values	Remarks/Method
Vapor Pressure:	58mm Hg @ 38°C	No information available
Vapor Density:	> 60 mm Hg	No information available
Specific gravity:	1.12-1.16	No information available
Solubility in Water:	Completely (100%)	No information available
Solubility in other solvents:	No information available	No information available
Partition coefficient: N-octanol/water:	No information available	No information available
Autoignition temperature:	Not applicable	No information available
Decomposition temperature:	No information available	No information available
Kinematic viscosity:	No information available	No information available
Dynamic viscosity:	550 - 1000 cps	No information available

Density:	9.34 ó 9.67 lb/gal
Bulk Density:	No information available
Explosive properties:	No information available
Oxidizing properties:	No information available
Softening point:	No information available
Molecular weight:	No information available
Volatile organic compounds (VOCs) content:	No information available
% Volatile (By Wt):	50%

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical Stability: Stable under normal conditions of handling, use and transportation.

Possibility of hazardous reactions

None under normal processing.

Incompatible materials

Materials to avoid: Strong oxidizers; Contact with copper, copper alloys, aluminum, mild steel or iron may cause corrosion/ degradation.

Hazardous Decomposition

Products: Thermal decomposition (as may be experienced in a fire) may produce hydrogen chloride gas and /or oxides of nitrogen and carbon.

Hazardous polymerization: Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

PRINCIPAL ROUTES OF EXPOSURE: skin, eyes and respiratory tract

Eye contact: None expected, but prolonged or repeated eye contact may result in mild irritation and redness of a short-term nature.

Skin: None expected, but prolonged or repeated skin contact may result in irritation of a short-term nature.

Inhalation: Not considered hazardous under normal conditions of use. Although unlikely to occur, inhalation could result in an adverse reaction to persons previously sensitized to the material.

Ingestion: Effects of ingesting small amounts are negligible; ingesting large amounts may injure person slightly.

Acute toxicity

Oral LD50 >2000 mg/kg (rat: estimated)
Dermal LD50 >2000 mg/kg (rat: estimated)
Inhalation LC50 No information available

Information on Toxicological effects

Symptoms: No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation

Testing conducted on rabbits using the Draize technique revealed the material to be mildly irritating to the skin.

Serious eye damage/eye irritation

Testing conducted using the Draize technique revealed that the material produces no corneal or iridial effects and only minor conjunctival effects.

Sensitization

No information available.

Germ cell mutagenicity

This product was negative in the Ames Test. This product was negative in the mouse Micronucleus Test.

Carcinogenicity

This product does not contain any components in concentrations greater than or equal to 0.1% that are listed as known or suspected carcinogens by NTP, IARC, ACGIH OR OSHA.

Reproductive toxicity

No information available.

Specific target organ toxicity-Single exposure

No information available.

Specific target organ toxicity-Repeated exposure

No information available.

Aspiration hazard

No information available.

Other information

Conclusions are drawn from sources other than direct testing.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The effects of this product on aquatic organisms are rapidly and significantly reduced with the presence of dissolved organic carbon in the aquatic environment.

Acute aquatic toxicity

Fish: LC50 (96 hour): >10 mg/L ó Zebra Fish (*Danio rerio*)
Crustacea: EC50 (48 hour): >10 mg/L-Water flea (*Daphnia magna*)
Algae/aquatic plants: No information available

Mobility No information

Persistence and degradability No information available

Bioaccumulative potential This product does not bio-accumulate.

Results of PBT and vPvB assessment No information available

Other adverse effects

Other information: No other ecological studies have been carried out on this product.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

Recycle, if possible. If not, dispose of the waste material in accordance with all applicable federal, state and local laws and regulation regarding health and pollution.

Contaminated packaging

Since empty containers retain product residue, follow label warnings even after container is emptied.

14. **TRANSPORTATION INFORMATION**

DOT Status Not regulated
ICAO/IATA Status Not regulated
IMDG Status No regulated

15. **REGULATORY INFORMATION**

International Inventories

TSCA (United States)

All ingredients are on the inventory or exempt from listing.

Australia (AICS)

All ingredients are on the inventory or exempt from listing.

Canada (DSL)

All ingredients are on the inventory or exempt from listing.

Canada (NDSL)

None of the ingredients are on the inventory.

China (IECSC)

All ingredients are on the inventory or exempt from listing.

EINECS (European Inventory of Existing Chemical Substances)

Some ingredients are not on the inventory.

ELINCS (European List of Notified Chemical Substances)

None of the ingredients are on the inventory.

ENCS (Japan)

All ingredients are on the inventory or exempt from listing.

South Korea (KECL)

All ingredients are on the inventory or exempt from listing.

Philippines (PICCS)

All ingredients are on the inventory or exempt from listing.

Legend

TSCA- United States Toxic Substances Control Act Section 8(b) Inventory

AICS- Australian Inventory of Chemical Substances

DSL/NDSL- Canadian Domestic Substances List/Non-Domestic Substances List

IECSC- China Inventory of Existing Chemical Substances

EINECS/ELINCS- European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS- Japan Existing and New Chemical Substances

KECL- Korean Existing and Evaluated Chemical Substances

PICCS- Philippines Inventory of Chemicals and Chemical Substances

U.S. Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

SARA Section 311/312 Hazard Categories:

Acute health hazard: No
Chronic health hazard: No
Fire hazard: No
Sudden release of pressure hazard: No
Reactive hazard: No

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subjects to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, part 372.

U.S. State Regulations

CALIFORNIA PROP 65: WARNING ! This product may contain traces of a substance (s) known to the State of California to cause cancer and/or reproductive toxicity.

U.S. State Right-to Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations.

NFPA Rating: Health-1 Flammability-0 Instability-0 Special hazard-
HMIS Rating: Health-1 Flammability-0 Physical hazard-0 Personal protection-B

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OTHER INFORMATION

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.

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