



## Solve 328

### Safety Data Sheet

Date Issued: 06/18/2018

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#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

##### 1.1 Product identifier

PRODUCT NAME: **SOLVE 328**

PRODUCT TYPE: Mixture

##### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Processing aid for industrial applications.

Uses advised against: None.

##### 1.3 Details of the supplier of the safety data sheet

COMPANY: WaterSolve, LLC, 5031 68<sup>th</sup> Street, Caledonia, Michigan 49316, USA  
For Product information call 616-575-8693. [www.gowatersolve.com](http://www.gowatersolve.com)

##### 1.4 Emergency telephone number

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

##### 2.1 Classification of the substance or mixture

Classification according to paragraph (d) of Regulation 29 CFR 1910.1200:

Not classified.

##### 2.2 Label elements

Labeling according to paragraph (f) of Regulation 29 CFR 1910.1200:

Hazard symbol(s): None.

Signal word: None.

Hazard statement(s): None.

Precautionary statement(s): None.

##### 2.3 Other hazards

Spills produce extremely slippery surfaces.

Ingredients(s) of unknown acute toxicity: None.

For explanation of abbreviations see Section 16.

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

##### 3.1 Substances:

Not applicable, this product is a mixture.

##### 3.2 Mixtures:

This product is a mixture.

**Hazardous components:**

Contains no reportable hazardous substances.

**4. FIRST AID MEASURES**

**4.1 Description of first aid measures**

**Inhalation:** Move to fresh air. No hazards which require special first aid measures.

**Skin Contact:** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. In case of persistent skin irritation, consult a physician.

**Eye Contact:** Rinse immediately with plenty of water, also under the eyelids for, at least 15 minutes. Alternatively, rinse immediately with Diphoterine ®. Get prompt medical attention.

**Ingestion:** Rinse mouth with water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.

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

None under normal use.

**4.3 Indication of any immediate medical attention and special treatment needed.**

None under normal use.

**Other Information:**

None.

**5. FIRE-FIGHTING MEASURES**

**5.1 Extinguished media**

**Suitable extinguishing media:**

Water. Water spray. Foam. Carbon dioxide (CO<sub>2</sub>). Dry powder.  
WARNING! Spills produce extremely slippery surfaces.

**Unsuitable extinguishing media:**

None.

**5.2 Special hazards arising from the substance or mixture:**

**Hazardous decomposition products:**

Carbon oxides (COx). Nitrogen oxides (NOx). Hydrogen chloride. Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

**5.3 Advice for fire-fighters**

**Protective measures:** Wear self-contained breathing apparatus and protective suit.

**Other information:** Spills produce extremely slippery surfaces.

**6. ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures.**

**Personal precautions:** Do not touch or walk through spilled material. Spills produce extremely slippery surfaces.

**Protective equipment:** Wear adequate personal protective equipment (see Section 8 Exposure Controls/Personal Protection).

**Emergency procedures:** Keep people away from spill/leak. Prevent further leakage or spillage if safe to do so.

**6.2 Environmental precautions:**

Do not contaminate water.

**6.3 Methods and material for containment and cleaning up**

**Small spills:** Do not flush with water. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

**Large spills:** Do not flush with water. Dam up. Clean up promptly by scoop or vacuum.

**Residues:** Soak up with inert absorbent material. After cleaning, flush away traces with water.

**6.4 Reference to other sections**

Section 7: Handling and storage; Section 8: Exposure controls/personal protection; Section 13: Disposal considerations

7. **HANDLING AND STORAGE**

**7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Renders surfaces extremely slippery when spilled. When using, do not smoke, drink or eat.

**7.2 Conditions for safe storage, including any incompatibilities.**

Keep away from heat and sources of ignition. Freezing will affect the physical condition and may damage the material.

**7.3 Specific end uses**

None.

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters**

**Occupational Exposure limits:**

None known.

**8.2 Exposure controls**

**Appropriate engineering controls:**

Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.

**Individual protection measures, such as personal protective equipment:**

a) **Eye/face protection:** safety glasses with side-shields.

b) **Skin protection:** i) Hand protection: PVC or other plastic material gloves.  
ii) Other: Wear coveralls and/or chemical apron and rubber footwear where physical contact can occur.

c) **Respiratory protection:** No personal respiratory protective equipment normally required.

d) **Additional advice:** Wash hands before breaks and immediately after handling the product. Wash hands before breaks and at the end of workday.

**Environmental exposure controls:** Do not allow uncontrolled discharge of product into the environment.

9. **PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

a) **Appearance:** Clear to slightly yellow liquid

b) **Odor:** None

c) **Odor threshold:** Not applicable

<b>d) pH:</b>	4 - 7
<b>e) Melting point/freezing point:</b>	< 0 °C
<b>f) Initial boiling point /boiling range:</b>	> 100 °C
<b>g) Flash point:</b>	Does not flash.
<b>h) Evaporation rate:</b>	No data available.
<b>i) Flammability (solid, gas):</b>	Not applicable
<b>j) Upper/lower flammability/explosive limits:</b>	Not expected to create explosive atmospheres.
<b>k) Vapor pressure:</b>	2.3 kPa @ 20 °C
<b>l) Vapor density:</b>	0.804 g/litre @ 20 °C
<b>m) Relative density:</b>	1.1 – 1.2
<b>n) Solubility:</b>	Completely miscible
<b>o) Partition coefficient:</b>	< 0
<b>p) Autoignition temperature:</b>	Does not self-ignite (based on the chemical structure).
<b>q) Decomposition temperature:</b>	>150 °C
<b>r) Viscosity:</b>	See technical bulletin
<b>s) Explosive properties:</b>	Not expected to be explosive based on the chemical structure.
<b>t) Oxidizing properties:</b>	Not expected to be oxidizing based on the chemical structure.

**9.2 Other information:**

None.

**10. STABILITY AND REACTIVITY**

**10.1 Reactivity:** Stable under recommended storage conditions.

**10.2 Chemical Stability:** Stable under recommended storage conditions.

**10.3 Possibility of Hazardous reactions:** None known.

**10.4 Conditions to avoid:** Protect from frost, heat and sunlight.

**10.5 Incompatible materials:** None known.

**10.6 Hazardous decomposition products:**

Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NO<sub>x</sub>), carbon oxides (CO<sub>x</sub>). Hydrogen cyanide (hydrocyanic acid).

**11. TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**

**Information on the product as supplied:**

**Acute Oral toxicity:** LD50/oral/rat > 5,000 mg/kg

**Acute Dermal toxicity:** LD50/dermal/rat > 5,000 mg/kg

**Acute Inhalation toxicity:** Testing by the inhalation route is inappropriate because exposure of humans via inhalation is unlikely: the substance has no vapor pressure and there is practically no exposure to inhalable aerosols.

**Skin corrosion/irritation:** Non-irritating to skin.

**Serious Eye damage/ irritation:** Slightly irritating.

**Respiratory/skin Sensitization:** Not sensitizing to skin. No respiratory sensitization has been observed in the workplace.

**Mutagenicity:** By analogy with similar products, this product is not expected to be mutagenic.

**Carcinogenicity:** By analogy with similar substances, this substance is not expected to be carcinogenic.

**Reproductive Effects:** By analogy with similar substances, this substance is not expected to be toxic for reproduction.  
**STOT - single exposure:** No known effects.  
**STOT - repeated exposure:** No known effect.  
**Aspiration hazard:** No hazards resulting from the material as supplied.

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

#### **Information on the product as supplied:**

**Acute toxicity to fish:** LC50/Danio rerio/96 hrs. = 10 -100 mg/L  
**Acute toxicity to invertebrates:** EC50/Daphnia magna/48 hours = 10 -100 mg/L  
**Acute toxicity to Algae:** Algae inhibition tests are not appropriate. The flocculation characteristics of the product interfere directly in the test medium preventing homogenous distribution which invalidates the test.  
**Chronic toxicity to fish:** No data available  
**Chronic toxicity to invertebrates:** No data available  
**Toxicity to microorganisms:** No data available  
**Effects on terrestrial organisms:** No data available. Exposure to soil is unlikely.  
**Sediment toxicity:** No data available. Exposure to sediment is unlikely.

### 12.2 Persistence and degradability

#### **Information on the product as supplied:**

**Degradation:** Not readily biodegradable.  
**Hydrolysis:** Does not hydrolyse.  
**Photolysis:** No data available

### 12.3 Bioaccumulative potential

#### **Information on the product as supplied:**

The product is not expected to bioaccumulate.  
**Partition co-efficient (Log Pow):** < 0  
**Bio concentration factor (BCF):** ~0

### 12.4 Mobility in soil

#### **Information on the product as supplied:**

Exposure to soil is not to be expected.  
**Koc:** No data available

### 12.5 Other adverse effects:

None.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### **Waste from residues /unused products:**

Dispose of in accordance with local, state national and international regulations.

#### **Contaminated packaging:**

Rinse empty containers with water and use the rinse-water to prepare the working solution. If recycling is not practicable, dispose of in compliance with local regulations.

#### **Recycling:**

Store containers and offer for recycling of material when in accordance with the local, state, national and international regulations.

14. **TRANSPORT INFORMATION**

Land Transport (DOT)	Not classified.
Sea Transport (IMDG)	Not classified.
Air Transport (IATA)	Not classified.

15. **REGULATORY INFORMATION**

**15.1 Safety, health and environmental regulations/legislation specific for substances or mixture**

**Information on the product as supplied:**

**TSCA Chemical Substances Inventory:**

All components of this product are either listed on the inventory or are exempt from listings.

**US SARA Reporting requirements:**

**SARA (SECTION 311/312) hazard class:**

Not concerned

**SARA Title III Sections:**

**Section 302 (TPQ)-Reportable Quantity:**

Not concerned

**Section 304-Reportable Quantity:**

Not concerned

**Section 313 (De minimis concentration):**

Not concerned

**Clean Water Act:**

**Section 311 Hazardous Substances (40 CFR 117.3) - Reportable Quantity:**

Not concerned

**Clean Air Act:**

**Section 112(r) Accidental release prevention requirements (40 CFR 68) - Reportable Quantity:**

Not concerned

**CERCLA:**

**Hazardous Substances List (40 CFR 302.4)- Reportable Quantity:**

Not concerned

**RCRA Status:**

Not RCRA hazardous.

**California Proposition 65 Information:**

Warning! This product contains a chemical known to the state of California to cause cancer and birth defects or other reproductive harm, Epichlorohydrin, 1,3-Dichloro-2-propanol (1,3-DCP), 3-Monochloropropane-1,2-diol (3-MCPD)

16. **OTHER INFORMATION**

**HMIS & NFPA Ratings**

**NFPA:**

Health:	0
Flammability:	0
Instability:	0

**HMIS:**

Health:	0
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Flammability: 0  
Physical Hazard: 0  
PPE Code: B

**Key or legend to abbreviations and acronyms used in the safety data sheet:**

**Acronyms:**

STOT = Specific target organ toxicity

**Training advice:**

Do not handle until all safety precautions have been read and understood.

**This SDS was prepared in accordance with the following:**

U.S. Code of Federal Regulations 29 CFR 1910.1200

**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 information 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