



## Cationic Emulsions Series Solve 211C Series

### Material Safety Data Sheet

Date Issued: 05/30/08

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#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **SOLVE 211C Series**  
CHEMICAL TYPE: Water soluble polymer in emulsion.  
COMPANY: WaterSolve, LLC, 4964 Starr St. S.E., Grand Rapids, MI 49546, USA  
For Product information call 616-575-8693.

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

*Identification of the preparation:* Cationic water-soluble polymer in emulsion.

#### 3. HAZARDS IDENTIFICATION

Aqueous solutions or powders that become wet render surfaces extremely slippery.

#### 4. FIRST AID MEASURES

**Inhalation:** Move to fresh air.

**Skin Contact:** Wash off immediately with soap and plenty of water. In case of persistent skin irritation, consult a physician.

**Eye Contact:** Rinse thoroughly with plenty of water, also under the eyelids. In case of persistent eye irritation, consult a physician.

**Ingestion:** The product is not considered toxic based on studies on laboratory animals.

#### 5. FIRE FIGHTING MEASURES

**Suitable extinguishing media:** Water, water spray, foam, carbon dioxide (CO<sub>2</sub>), dry powder.

**Special fire-fighting precautions:** Spills produce extremely slippery surfaces.

**Protective equipment for firefighters:**  
No Special protective equipment required.

## 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions:** No special precautions required.
- Environmental precautions:** Do not contaminate water.
- Methods for cleaning up:** Do not flush with water. Dam up. Soak up with inert absorbent material. If liquid has been spilled in large quantities clean up promptly by scoop or vacuum. Keep in suitable and closed containers for disposal. After cleaning, flush away traces with water.

## 7. HANDLING AND STORAGE

- Handling:** Avoid contact with skin and eyes. When preparing the working solution ensure there is adequate ventilation. When using do not smoke.
- Storage:** Keep in a dry, cool place (0-30 °C). Keep away from heat and sources of ignition. Freezing will affect the physical condition and may damage the material.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering controls:** Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.
- Personal protection equipment**
- Respiratory protection:** In case of insufficient ventilation wear suitable respiratory equipment.
- Hand Protection:** Rubber gloves.
- Eye protection:** Safety glasses with side-shields. Do not wear contact lenses.
- Skin protection:** Chemical resistant apron or protective suit if splashing or contact with solution is likely.
- Hygiene measures:** Wash hands before breaks and at the end of workday. Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Form: viscous liquid
- Color: milky
- Odor: aliphatic
- pH: 4-9 @ 5 g/l; for product series.
- Flash point (°C): Does not flash.
- Autoignition temp. (°C): Does not ignite.
- Vapor pressure (mm Hg): 0.13 @ 20 °C

## 10. STABILITY AND REACTIVITY

- Stability:** Product is stable. No hazardous polymerization will occur. Oxidizing agents may cause exothermic reactions.
- Hazardous decomposition Products:** Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NOX), carbon oxides.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

- Oral:** LD50/oral/rat > 5,000 mg/kg  
**Dermal:** The results of testing on rabbits showed this material to be non-toxic even at high dose levels.  
**Inhalation:** The product is not expected to be toxic by inhalation.

### Irritation

- Skin:** May cause skin irritation with susceptible persons.  
**Eyes:** **May cause** mild eye irritation with susceptible persons..  
**Sensitization:** The results of testing on guinea pigs showed this material to be non-sensitizing.  
**Chronic toxicity:**  
A two year feeding study on rats did not reveal adverse health effects. A one year feeding study on dogs did not reveal adverse health effects. Prolonged skin contact may defat the skin and produce dermatitis.

## 12. ECOLOGICAL INFORMATION

- Ecotoxicity:** This product is rapidly eliminated from the aquatic medium through irreversible adsorption onto suspended matter and dissolved organics.
- Fish:** **LC50/Danio rerio/96 hr > 10-100 mg/L** (OECD 203)  
LC50/Fathead minnows/96hr > 10mg/L (OECD 203) (Based on the toxicity of the components using the Conventional Method.
- Algae:** Algal inhibitions tests are not appropriate. The flocculating characteristic of the product interfere directly in the test medium preventing homogenous distribution which invalidate the test.
- Daphnia:** EC50/Daphnia magna/48 hr >50mg/L (OECD 202) (Based on the toxicity of the components using the Conventional Method.
- .Environmental Fate:**  
The aquatic toxicity is highly mitigated by the presence of dissolved organic carbon in the water. Results obtained using the US EPA "Dirty Water" test show that irreversible adsorption onto suspended matter and dissolved organics (such as humic and other organic acids ) present in natural waters, reduces the toxicity to aquatic organisms by a factor of over 10.
- Bioaccumulation:**  
Does not bioaccumulate.
- Persistence/degradability:**  
Not readily biodegradable.

## 13. DISPOSAL CONSIDERATIONS

- Waste from residues/unused products:**  
In accordance with federal, state and local regulations
- Contaminated packaging:**  
Rinse empty containers with water and use the rinse water to prepare the working solution. Can be landfilled or incinerated, when in compliance with local regulations.

**14. TRANSPORT INFORMATION**

Not regulated by DOT, IATA, IMDG.

**15. REGULATORY INFORMATION**

All components of this product are on the TSCA and DSL inventories.

**RCRA status:** Not a hazardous waste.

**Hazardous waste number:** Not applicable

**Reportable quantity (40 CFR 302):**  
Not applicable

**Threshold planning quantity (40 CFR 335):**  
Not applicable

**California Proposition 65 information:**  
The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains a chemical(s) known to the state of California to cause cancer: residual Acrylamide.

HMIS & NFPA Rating	HMIS	NFPA
Health:	1	1
Flammability:	1	1
Reactivity:	0	0
Personal Protective/Special:	B	

**16. OTHER INFORMATION**

Person to contact: Regulatory Affairs Manager

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 information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release, and is not to be considered a warranty or quality specification. The knowledge and belief of WaterSolve, LLC, the information is accurate and reliable as of the date indicated but WaterSolve, LLC makes no express or implied warranty of merchantability for the material or the information. WaterSolve, LLC makes no express or implied warranty of fitness for a purpose for the material or for the 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.