



## Cationic Dry Solve 6155

### Material Safety Data Sheet

Date Issued: 04/13/2013

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#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **SOLVE 6155**  
CHEMICAL FAMILY: Cationic Polyacrylamide  
Molecular Formula: Polymer  
COMPANY: WaterSolve, LLC, 5031 68th Street, Caledonia, Michigan 49316, USA  
For Product information call 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)

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA Regulated Components

Component	CAS NO.	%	OSHA (pel)	AGGIH (TLV)
Adipic Acid	124-04-9	~4.5	Not establish	5mg/m <sup>3</sup> (TWA)

#### 3. HAZARDS IDENTIFICATION

##### Emergency Overview

Appearance and odor: Off White crystalline powder, no odor

Statement of Hazard: **IMPORTANT: SPILLS OF THIS PRODUCT ARE VERY SLIPPERY WHEN WET**

##### Potential Health effects

Effects of overexposure:

The estimated acute oral (rat) LD50, acute dermal (rabbit) LD50 and 4-hour inhalation (rat) LC50 values for this material are >5000mg/kg, >2000 mg/kg and >20 mg/L respectively. Direct contact with this material may cause Minimal skin and mild eye irritation. Refer to Section 11 for toxicology information on the regulated components of this product.

#### 4. FIRST AID MEASURES

##### Ingestion:

Material is not expected to be harmful by ingestion. No specific first aid measures are required.

##### Skin contact:

Wash immediately with plenty of water and soap

##### Eye contact:

Rinse immediately with plenty of water for at least 15 minutes.

##### Inhalation:

Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

5. **FIRE FIGHTING MEASURES**

**Suitable Extinguishing Media:**

Use water spray, fog, carbon dioxide or dry chemical.

**Protective Equipment:**

Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See MSDS Section 8 (exposure Controls/Personal Protection)

**Special Hazards:**

Dust may be explosive if mixed with air in critical proportions and in the presence of a source of ignition.

**Mechanical/Static Sensitivity Statements:**

Maintain good housekeeping to control dust accumulations.

6. **ACCIDENTAL RELEASE MEASURES**

**Personal precautions:**

Refer to Section 8 (Exposure Controls/Personal Protection) for appropriate personal protective equipment.

**Methods For Cleaning Up:**

Slippery when wet. Sweep up into containers for disposal. Flush spill area with water. If slipperiness remains apply more dry-sweeping compound. Prevent liquid entering sewers.

7. **HANDLING AND STORAGE**

**Handling**

Precautionary Measures: Spills should be scooped up or wiped up immediately, and the spill area flushed with water.

**Special Handling Statements:** Maintain good housekeeping to control dust accumulations.

**STORAGE**

To avoid product degradation and equipment corrosion, do not use iron, copper or aluminum containers or equipment.

**Storage Temperature:** Room temperature

**Reason:** Integrity

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Engineering measures:**

Engineering controls are not usually necessary if good hygiene practices are followed.

**Respiratory protection:**

Not recommended.

**Eye protection:**

Wear eye/face protection.

**Skin protection:**

Avoid skin contact. Wear impermeable gloves.

**Additional Advice:**

Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance and Odor:	Off white crystalline powder, no odor
Boiling Point:	Not applicable
Melting Point:	Not available
Vapor Pressure:	Not applicable
Specific Gravity:	0.75
Vapor Density:	Not applicable
% Volatile (By Wt):	7-8 (water)
pH:	5-7 ( as solution)
Saturation in Air (% by Vol):	Not applicable
Evaporation Rate:	Not applicable
Solubility in Water:	Limited by viscosity
Volatile Organic Content:	Not applicable
Flash point:	Not applicable
Flammable Limits (% by vol):	Not available
Autoignition temp:	Not available
Decomposition temp:	Not available
Odor Threshold	Not available
Partition coefficient (n-octanol/water)	Not available

**10. STABILITY AND REACTIVITY**

Stability:	Stable
Conditions to avoid:	Avoid contact with alkaline materials which will degrade the polymer.
Polymerization:	Will not occur
Conditions to Avoid:	None known
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition Products:	Oxides of nitrogen Hydrogen chloride Carbon dioxide Carbon monoxide Ammonia

**11. TOXICOLOGICAL INFORMATION**

Toxicological information for the product is found under Section 3.  
Toxicological information on the OSHA regulated components of this product is as follows:

Adipic acid has an acute oral LD50 (rat) value of greater than 11,000 mg/kg. Direct eye contact caused moderate irritation in rabbits. Contact with skin can cause drying, cracking and mild irritation. Inhalation of vapor can irritate mucous membranes of the upper respiratory tract, causing coughing and sneezing. Rare instances of immediate hypersensitive asthmatic reactions have been reported.

California Proposition 65 Warning (applicable in California only)- This product contains (a) chemical(s) known to the State of California to cause cancer .

## 12. ECOLOGICAL INFORMATION LC50

This material is not classified as dangerous for the environment.

The effects on aquatic organisms are due to an external (non-systemic) mode of action, and are significantly reduced (by a factor of 7-20) within 30 minutes due to binding of the product to dissolved organic carbon and inorganic sorbents such as clays and silts. All ecological information provided was conducted on a structurally similar product. Acute toxicity tests conducted on the polymer using environmentally representative water gave the following results:

### **Algae Test Results**

Test: Growth Inhibition (OECD 201)

Due to the cationicity of the polymer, an algae growth inhibition test is not appropriate.

### **Fish Test Results**

Test: Acute toxicity, freshwater (OECD 203)

Duration: 96 h

Species: Zebra fish (*Brachydanio rerio*)

LC50: >1-10 mg/L

### **Invertebrate Test Results**

Test: Acute Immobilization (OECD 202)

Duration: 48 h

Species: Water flea (*Daphnia magna*)

EC50: > 10-100 mg/L

### Degradation:

Test: CO2 Evolution: Modified Sturm (OECD 301B)

Duration: 28 day

This material is not readily biodegradable (OECD 301B), but degradable hydrolysis. The large polymer size is incompatible with transport across biological membranes and diffusion; the bioconcentration factor is therefore considered to be zero.

## 13. DISPOSAL CONSIDERATIONS

The information on RCRA waste classification and disposal methodology provided below applies only to the product, as applied. If the material has been altered or contaminated, or it has exceeded its recommended shelf life, the guidance may be inapplicable. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA "listed hazardous waste" or has any of the four RCRA "hazardous waste characteristics." Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA "listed hazardous waste"; information contained in Section 15 of this MSDS is not intended to indicate if the product is a "listed hazardous waste." RCRA Hazardous Waste Characteristic. There are four characteristics defined in 40 CFR Section 261.21-61.24: Ignitability, Corrosivity, Reactivity, and Toxicity. To determine Ignitability, See Section 5 of this MSDS (flash point). For Corrosivity, see sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 2 (composition). Federal regulations, may also apply to the classification of the material to be disposed. The company encourages the recycle, recovery and reuse of materials classified as RCRA hazardous wastes to be disposed of by thermal treatment or incineration at EPA approved facilities. The company has provided the foregoing for information only; the person generating the waste is responsible for determining the waste classification and disposal method.

**14. TRANSPORT INFORMATION**

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

USDOT

Proper Shipping Name: Not applicable/Not regulated

Hazardous Substances: Not applicable

TRANSPORT CANADA

Proper Shipping Name: Not applicable/Not regulated

ICAO/IATA

Proper Shipping name: Not applicable/Not regulated

Packing instructions/maximum net quantity per package:

Passenger Aircraft:

Cargo Aircraft:

IMO

Proper shipping name: Not applicable/Not regulated

**15. REGULATORY INFORMATION**

**INVENTORY INFORMATION**

USA : All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical I inventory.

Canada: All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL

European Union (EU): All components of this product are included on the European Inventory of Existing Chemical Substances (EINECS) or are not required to be listed on EINECS.

Australia: All components of this product are included in the Australian Inventory of Chemical Substances(AICA).

China: All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese Inventory.

Japan: All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese Inventory.

Korea: All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean inventory

Philippines: All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine inventory.

#### OTHER ENVIRONMENTAL INFORMATION

The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product. This product does not contain any components regulated under sections of the EPA.

Product Classification under section 311 of SARA
Not applicable

#### 16. OTHER INFORMATION

##### NFPA HAZARD RATING (National Fire Protection Association)

Health 0- Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

Fire 1 – Materials that must be preheated before ignition can occur.

Reactivity 0 –Materials that in themselves are normally stable, even under fire exposure conditions.

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.