



WATER TREATMENT SERVICES, INC.

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WTSWW-511CE

MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT IDENTIFICATION

PRODUCT NAME: **WTSWW-511CE**
CHEMICAL DESCRIPTION: Cationic Emulsion Polymer
PRODUCT CLASS: Polymer
VERSION: 9-14-12

SECTION 2: INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Weight %	OSHA PEL	ACGIH TLV
AM/AETAC polymer*	69418-26-4	25-45	None established	None established
Straight-run middle distillate (petroleum)	64741-44-2	15-35	TWA: 5 mg/m ³ , oil mist	TWA: 5 mg/m ³ , oil mist
Sorbitan monostearate	1338-41-6	<1	None established	None established
Alcohol ethoxylate	Proprietary	<1	None established	None established

AM: Acrylamide
AETAC: 2-(acryloyloxy)ethyltrimethylammonium chloride

SECTION 3: HAZARDS IDENTIFICATION

*****EMERGENCY OVERVIEW*****

Opaque off-white viscous liquid.

CAUTION!

May cause eye and skin irritation with prolonged contact.

Water in contact with this product will cause slippery floor conditions.

PRIMARY ROUTES OF ENTRY: Eye and skin contact

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: A review of available data does not identify any worsening of existing conditions.

POTENTIAL HEALTH EFFECTS:

EYE CONTACT: Irritation may occur with prolonged contact.

SKIN CONTACT: Irritation may occur with prolonged contact.

INGESTION: Not a likely route of exposure. No adverse effects are expected, other than possible mucosal damage.

INHALATION: Inhalation is not a likely route of exposure. Negligible hazard at normal temperature (up to 100 °F / 38 °C). May cause irritation of mucous membranes.

SUBCHRONIC, CHRONIC: Frequent or prolonged contact with this product may defat and dry the skin, leading to discomfort and dermatitis.

CARCINOGENICITY:

NTP: No ingredients listed in this section

IARC: No ingredients listed in this section

OSHA: No ingredients listed in this section

SECTION 4: FIRST AID MEASURES

EYE CONTACT: Immediately wipe or blot away excess material with a clean cloth or paper towel and then flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally to ensure complete rinsing. Get medical attention.

SKIN CONTACT: In a timely manner remove contaminated clothing and wash the affected area thoroughly with plenty of soap and water. Get medical attention if symptoms develop. Wash contaminated clothing before reuse.

INGESTION: In case of ingestion, do NOT induce vomiting without medical advice. If victim is conscious and alert, washout mouth with water and give water to drink. Get medical attention. Never give anything by mouth to an unconscious person.

INHALATION: Remove victim to fresh air. If breathing stops, give artificial respiration. If breathing is difficult, have a trained medical person give oxygen. Get medical attention.

NOTE TO PHYSICIAN: Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

SECTION 5: FIRE-FIGHTING MEASURES

FLASH POINT: >200 °F (>93.3 °C), PMCC

LOWER FLAMMABLE LIMIT: Not flammable

UPPER FLAMMABLE LIMIT: Not flammable

AUTO-IGNITION TEMPERATURE: Not available

EXTINGUISHING MEDIA: Carbon dioxide. Foam. Dry powder. Other extinguishing agent suitable for Class B fires. For large fires, use water spray or fog, thoroughly drenching the burning material.

UNSUITABLE EXTINGUISHING MEDIA: Do not use water unless flooding amounts are available

FIRE-FIGHTING INSTRUCTIONS: Exercise caution when fighting any chemical fire. Wear a full face positive-pressure self contained breathing apparatus and protective suit.

FIRE & EXPLOSION HAZARDS: Low Fire Hazard. Liquids may burn upon heating to temperatures at or above the flash point. Water in contact with this product will cause slippery floor conditions.

DECOMPOSITION PRODUCTS: Thermal decomposition or combustion may produce oxides of carbon and oxides of nitrogen.

NFPA RATINGS: Health = 0 Flammability = 1 Reactivity = 0 Special Hazard = None

Hazard rating scale: 0=Minimal; 1=Slight; 2=Moderate; 3=Serious; 4=Severe

SECTION 6: ACCIDENTAL RELEASE MEASURES**PERSONAL PRECAUTIONS:**

Do not touch spilled material. Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so. Ventilate spill area if possible. Remove sources of ignition. Notify appropriate government, occupational health and safety, and environmental authorities.

METHODS FOR CLEANING UP:

Small Spills: Soak up spill with an inert absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. Water in contact with the product will cause slippery floor conditions.

Large Spills: Contain liquid using an inert absorbent material, by digging trenches, or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Clean contaminated surfaces with water or aqueous cleaning agents.

DISPOSAL:

Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS:

Prevent material from entering sewers or waterways. If drains, streams, soil or sewers become contaminated, notify local authority. Spills are toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

SECTION 7: HANDLING AND STORAGE**HANDLING:**

Avoid contact with eyes, skin and clothing.

Avoid breathing product mists/vapors.

Do not take internally.

Wash thoroughly after handling.

Do not take internally.

Keep containers closed when not in use.

Ensure that all containers are labeled.

Have emergency equipment (for fires, spills, leaks, etc.) readily available.

Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection).

STORAGE:

Store in a cool, dry, well-ventilated area away from oxidizers.

Store away from heat and sources of ignition.

Protect product from freezing.

SUITABLE CONSTRUCTION MATERIAL:

Stainless Steel 304, Brass, Buna-N, Polyethylene, HDPE (High Density Polyethylene), PVC, Polyurethane, Fluoroelastomer, Epoxy Phenolic resin

UNSUITABLE CONSTRUCTION MATERIAL:

EPDM, Neoprene, Chlorosulfonated Polyethylene Rubber

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

EYE/FACE PROTECTION: Chemical splash goggles

SKIN PROTECTION: Nitrile gloves. PVC gloves. Viton gloves

RESPIRATORY PROTECTION: Due to the low volatility and toxicity of this product, the hazard potential associated with this material is relatively low. Respiratory protection is not normally needed. If significant mists, vapors, or aerosols are generated, an approved full-face respirator is recommended. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, and maintenance and inspection.

ENGINEERING CONTROLS: General ventilation is recommended.

HYGIENE RECOMMENDATIONS: Keep an eye wash fountain available. Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

pH (100%): 5.0

SPECIFIC GRAVITY: 0.98-1.05

SOLUBILITY IN WATER: Partial

BOILING POINT: 207 °F (97 °C)

FREEZING POINT: 1.4 °F (-17 °C)

VAPOR PRESSURE: Not available

VAPOR DENSITY (air=1): Not available

VISCOSITY: 825 cps @ 75 °F (24 °C)

VOLATILE ORGANIC CARBON (VOC) CONTENT: 22.16%, EPA Method 24

APPEARANCE AND ODOR: Opaque off-white viscous liquid with a hydrocarbon odor

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under normal conditions

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: Freezing temperatures. Heat

INCOMPATIBILITY: The addition of water results in gelling. Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions, and/or toxic vapors.

DECOMPOSITION PRODUCTS: Thermal decomposition or combustion may produce oxides of carbon and oxides of nitrogen.

SECTION 11: TOXICOLOGICAL INFORMATION

The following results are for the product.

ACUTE ORAL TOXICITY:

Species: Rat

LD50: > 5,000 mg/Kg

Test Descriptor: Product

SENSITIZATION:

This product is not expected to be a sensitizer.

CARCINOGENICITY:

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

HUMAN HAZARD CHARACTERIZATION:

Based on our hazard characterization, the potential human hazard is: Low

SECTION 12: ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL EFFECTS:**

The tests for (products or similar products) were performed in clean water as set forth by USEPA (EPA/600/4-90/027). In order to evaluate the potential toxicity mitigation, the tests for (representative polymers) were performed in environmentally relevant water with dissolved organic carbon (DOC: 4.5 mg/L). The toxicity of this product is due to an external mode of action, e.g., suffocation or immobilization. In the presence of suspended material, e.g., DOC, the polymers are bound to suspended material and the bioavailability is substantially reduced. As a result, the toxicity is expected to be lower. Under normal use and discharge conditions, the LC50 values of the representative polymers tested in the presence of DOC are expected to apply to this product. However, for large spills, the clean water data is more applicable.

ACUTE FISH RESULTS:

Species	Exposure	LC50	Test Descriptor
Rainbow Trout	96 hr	7.1 mg/L	Product tested in clean water
Zebra Danio	96 hr	1-10 mg/L	Representative emulsion polymer tested in water with DOC

ACUTE INVERTEBRATE RESULTS:

Species	Exposure	LC50	Test Descriptor
Daphnia magna	48 hr	1.71 mg/L	Product tested in clean water
Daphnia magna	48 hr	10-100 mg/L	Representative emulsion polymer tested in water with DOC

CHRONIC FISH RESULTS:

Species	Exposure	NOEC/LOEC	End Point	Test Descriptor
Fathead minnow	7 Day	0.78 mg/L/ 1.56 mg/L	Growth	Product tested in clean water

CHRONIC INVERTEBRATE RESULTS

Species	Test Type	NOEC/LOEC	End Point	Test Descriptor
Ceriodaphnia dubia	3 Brood	0.063 mg/L/ 0.125 mg/L	Reproduction	Product tested in clean water

ADDITIONAL ECOLOGICAL DATA:

NOEC on earthworm: > 1000 mg/L (representative polymer)

AOX information: Product contains no organic halogens.

Discharge in minor quantity into adapted biological units of sewage treatment plants is not expected to affect the efficiency of the activated sludge process.

PERSISTENCY AND DEGRADATION:

Chemical Oxygen Demand (COD): 1,200,000 mg/L

Biological Oxygen Demand (BOD): Biological degradation: Approx 60-70% (DIN EN 29888)

Abiotic degradation: Hydrolysis: >70%, 28 d at pH 6-8, which is equivalent to ready biodegradability according to DSD 67/548 Annex VI. Method EU C7, OECD 111

MOBILITY:

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models. If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	Water	Soil/Sediment
<5%	30-50%	50-70%

The product is eliminated via abiotic process (adsorption on activated sludge) to a large amount from the aqueous phase.

BIOACCUMULATION POTENTIAL: Elimination from the aqueous phase via precipitation or flocculation is possible. No bioaccumulation will occur. The large size of the polymer is incompatible with transport across the cellular membranes.

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION: Based on our hazard characterization, the potential environmental hazard is: Moderate

OTHER INFORMATION: The hazard characterization is based on the tests or potential hazard in the clean water.

If released into the environment, see CERCLA/SUPERFUND in Section 15.

SECTION 13: DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

SECTION 14: TRANSPORTATION

This product is not regulated during transportation.

DOT CLASSIFICATION:

ID Number: Not applicable

Proper Shipping Name: Not applicable

Class/Division: Not restricted

Label: None

Packing Group: Not applicable

SECTION 15: REGULATORY INFORMATION

OSHA Hazard Communication Status: Nonhazardous

TSCA: The ingredients of this product are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CERCLA: EPA Hazardous Substances (40 CFR 302):

<u>Chemical Name</u>	<u>CERCLA Reportable Quantity (RQ)</u>
None	

SARA TITLE III (Sections 302, 311, 312, and 313):

Section 302 Extremely Hazardous Substances (40 CFR 355):

<u>Chemical Name</u>	<u>CAS#</u>	<u>RQ</u>	<u>TPQ</u>
None			

Section 311 and 312 Health and Physical Hazards:

<u>Immediate</u>	<u>Delayed</u>	<u>Fire</u>	<u>Pressure</u>	<u>Reactivity</u>
no	no	no	no	no

Section 313 Toxic Chemicals (40 CFR 372):

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Percent by Weight</u>
None		

FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act: When use situations necessitate compliance with FDA regulations, this product is acceptable under: 21 CFR 176.170 Components of paper and paperboard in contact with aqueous and fatty foods and 21 CFR 176.180 Components of paper and paperboard in contact with dry foods. For use only as a retention and drainage aid employed prior to the sheet forming operation in the manufacture of paper and paperboard and limited to use at a level not to exceed 0.15% by weight (as polymer) of the finished paper and paperboard.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311: This product may contain trace levels (<0.1% for carcinogens, <1% all other substances) of the following substance(s) listed under the regulation. Additional components may be unintentionally present at trace levels.

Substance	Citations
Adipic acid	Sec. 311

CLEAN AIR ACT, Sec. 112 (Hazardous Air Pollutants, as amended by 40 CFR 63), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances): This product may contain trace levels (<0.1% for carcinogens, <1% all other substances) of the following substance(s) listed under the regulation. Additional components may be unintentionally present at trace levels.

Substance	Citations
Acrylamide	Sec. 112

CALIFORNIA PROPOSITION 65: This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels, which would require a warning under the statute.

MICHIGAN CRITICAL MATERIALS: Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

STATE RIGHT TO KNOW LAWS: The following substances are disclosed for compliance with State Right to Know Laws:

Adipic Acid 124-04-9

SECTION 16: OTHER INFORMATION

HMIS RATINGS: Health = 1 Flammability = 1 Reactivity = 0

Hazard Rating Scale: 0=Minimal; 1=Slight; 2=Moderate; 3=Serious; 4=Severe

The preceding information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change, and the conditions of handling and use or misuse are beyond our control, WaterTreatment Services makes no warranty, either express or implied, with respect to the completeness or continuing accuracy of the information contained herein, and disclaims all liability for reliance thereon. User should satisfy himself that he has all current data relevant to his particular use.