



Division of Azure Water Services, LLC

Material Safety Data Sheet

Product Name: Redux 380
MSDS #: 22

Effective date: 12/15/2007
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SECTION 1 -- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

IDENTIFICATION

Product Name Redux 380
Chemical Name Aqueous Blended Deposit Control Agent
Chemical Family
Formula
Synonym

COMPANY IDENTIFICATION

Redux Technology
Division of Azure Water Services, LLC
550 VT Rte. 30, P.O. Box 331
Newfane, VT 05345
Phone: 802-365-7200
Fax: 802-365-4652
Email: info@reduxtech.com

EMERGENCY TELEPHONE NUMBER

24 hours a day: CHEMTREC 1-800-424-9300.
Number for non-emergency questions concerning MSDS: (802) 365-7200

SECTION 2 -- COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS #	Amount (%W/W)
Water	7732-18-5	~80.0%
PolyCarboxylic Acid	Non Hazardous	~12.0%
Organophosphorous Compound	Proprietary	~8.0%

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SECTION 3 -- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW	Eye and skin irritant. Material may cause burns on exposed tissues. Eye contact may cause corneal injury, which may result in permanent impairment of vision, or even blindness. Prolonged or repeated skin may cause irritation or even a burn.
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POTENTIAL HEALTH EFFECTS	
INGESTION.....	Corrosive and causes severe and permanent damages to mouth throat and stomach. May be fatal if swallowed.
INHALATION.....	Damages airways and lungs, depending upon amount and duration of exposure. Effects can vary from irritation to bronchitis or pneumonia.
EYE CONTACT.....	Severely corrosive to the eyes, and may cause permanent damage, including blindness.
SKIN CONTACT.....	Corrosive; causes severe skin burns. Harmful contact may not cause immediate pain.

SECTION 4 -- FIRST AID MEASURES

INGESTION	If swallowed, DO NOT induce vomiting. Immediately drink a large quantity of water. If available, give large quantities of milk. Never give anything by mouth to an unconscious person. Get medical attention immediately. If vomiting occurs spontaneously, keep airway clear.
INHALATION	Get person out of contaminated area to fresh air. If breathing has stopped, resuscitate and administer oxygen if readily available. Get medical attention immediately.
EYE CONTACT	Immediately flush eye with plenty of cool, running water. Remove contact lenses if applicable and continue flushing for at least 15 minutes, holding eyelids apart to ensure thorough rinsing of the entire eye. Get medical attention immediately.
SKIN CONTACT	Immediately flush skin with plenty of cool running water for at least 15 minutes. Wash with soap and water. If irritation develops or persists, get medical attention. Remove contaminated clothing and shoes; wash before reuse.
NOTE TO PHYSICIAN	Information pertaining to ingestion toxicology, therapy, symptomatology and treatment can be found in <u>Clinical Toxicology of Commercial Products</u> , authored by Gosselin, Smith and Hodge and published by Williams & Wilkins, Baltimore, Maryland.

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SECTION 5 -- FIRE FIGHTING MEASURES

FLASH POINT / METHOD	None / N.A.	FLAMMABLE LIMITS	Not flammable or combustible
EXTINGUISHING MEDIA	Use extinguishing media appropriate for surrounding fire.		
SPECIAL FIRE FIGHTING PROCEDURES	Pressure demand self-contained respiratory protection and protective clothing should be worn by fire fighters.		
FIRE AND EXPLOSION HAZARDS	Not a fire or explosion hazard		

SECTION 6 -- ACCIDENTAL RELEASE MEASURES

RESPONSE TO SPILLS	Absorb with inert material such as vermiculite, shovel into closeable container for disposal. Thoroughly flush residual with water.
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SECTION 7 -- HANDLING AND STORAGE

HANDLING PRECAUTIONS	Wear proper safety equipment. Mix only with water. Follow appropriate tank entry procedures (ANSI Z117) and OSHA Confined Space Regulations.
STORAGE PRECAUTIONS	Store in a cool, dry and well-ventilated place. Keep from freezing. Keep container tightly closed when not in use.

SECTION 8 -- EXPOSURE CONTROLS / PERSONAL PROTECTION

HYGIENIC PRACTICES	Observe label precautions; use personal protective equipment. Avoid breathing mists or vapors of this product.
ENGINEERING CONTROLS	Facilities using this product must be equipped with an eyewash station. Local Exhaust: None

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PERSONAL PROTECTIVE EQUIPMENT

X	RESPIRATOR	NIOSH/MSHA approved respirator where mists or sprays may be generated.
X	GOGGLES / FACE SHIELD	Chemical splash goggles required; also use face shield if exposure is severe
X	APRON	Required; PVC, Neoprene or Vinyl acceptable
X	GLOVES	Required; use PVC, Neoprene or Nitrile with long gauntlet or protective cuff
X	BOOTS	Rubber

SECTION 9 -- PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Clear pale yellow liquid	BOILING POINT	> 212° F
ODOR	Slight Odor	FREEZING POINT	< 32° F
pH	Approx. 2.5	VAPOR PRESSURE	Similar to water
SPECIFIC GRAVITY	1.1	VAPOR DENSITY	Similar to water
SOLUBILITY IN WATER	Complete	EVAPORATION RATE	Similar to water

SECTION 10 -- STABILITY AND REACTIVITY

CHEMICAL STABILITY		STABLE	X		UNSTABLE	
CONDITIONS TO AVOID	Do not mix with anything but water.					
INCOMPATIBILITY	Do not mix with quaternary amines, acids, sulfides and strong oxidizers.					
HAZARDOUS PRODUCTS OF DECOMPOSITION	Carbon dioxide and carbon monoxide.					
POLYMERIZATION		WILL NOT OCCUR	X		MAY OCCUR	
CONDITIONS TO AVOID	Not applicable					

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SECTION 11 -- TOXICOLOGICAL INFORMATION

Oral: Rat LD50 = >6,500 mg/kg
Eye Irritation: Corrosive
Skin irritation: Mild Irritant

CARCINOGENICITY

	THIS PRODUCT CONTAINS A KNOWN OR SUSPECTED CARCINOGEN
X	THIS PRODUCT DOES NOT CONTAIN ANY KNOWN OR ANTICIPATED CARCINOGENS ACCORDING TO THE CRITERIA OF THE NTP ANNUAL REPORT ON CARCINOGENS AND OSHA 29 CFR 1910, Z

OTHER EFFECTS

ACUTE	May be corrosive to all body tissues which it comes in contact.
CHRONIC	The chronic local effect may consist of multiple areas of superficial destruction of the skin or of primary irritant dermatitis. Similarly, inhalation of dust, spray, or mist may result in varying degrees of irritation or damage to the respiratory tract tissues and an increased susceptibility to respiratory illness.

SECTION 12 -- ECOLOGICAL INFORMATION

BIODEGRADABILITY		CONSIDERED BIODEGRADABLE	X		NOT BIODEGRADABLE	
BOD / COD VALUE	Not established					
ECOTOXICITY	Ceriodaphnia: 48 hr LD50 = 2900 mg/l NOAEL = 2000 mg/l Fathead Minnow: 96 hr LD50 = 5700 mg/l NOAEL = 2000 mg/l					

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SECTION 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD	Product that cannot be used according to the label must be disposed of as a hazardous waste at an approved hazardous waste management facility. Empty containers may be triple rinsed, then offered for recycling or reconditioning; or puncture and dispose of in a sanitary landfill.							
RCRA CLASSIFICATION	Hazardous, corrosive D002							
RECYCLE CONTAINER		YES	X		CODE	2 - HDPE		NO

SECTION 14 -- TRANSPORT INFORMATION

DOT CLASSIFICATION		HAZARDOUS	X		NOT HAZARDOUS	
DESCRIPTION	Corrosive					

SECTION 15 -- REGULATORY INFORMATION

REGULATORY STATUS

	EPA REGISTERED (UNDER FIFRA)	
	FDA REGULATED	
	KOSHER	
	SARA TITLE III MATERIAL	
	USDA AUTHORIZED	
	NSF APPROVAL	

SECTION 16 -- OTHER INFORMATION

NFPA CLASSIFICATION

2	BLUE	HEALTH HAZARD
0	RED	FLAMMABILITY
1	YELLOW	REACTIVITY
C	WHITE	SPECIAL HAZARD