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MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT IDENTIFICATION: NEUTRALIZER

MATERIAL NAME (TRADE NAME): BACK TO NATURE NEUTRALIZER_19% ACETIC ACID
LIFT-N-STRIP NEUTRALIZER-19% AC.ETIC ACID
Acetic Acid, Aqueous
Acetic Acid Kosher Certified
Acetic Acid (40% to 90% Glacial)
Glacial Acetic Acid (includes USP Food and Tech. Grades)

CHEMICAL NAME: Acetic Acid
Ethanoic Acid
Methane Carboxylic Acid
CHEMICAL FAMILY: Aliphatic Carboxylic Acids

EMERGENCY TELEPHONE NUMBER		SALES & PRODUCT INFO PHONE
Chem Trec	(800) 424-9300	847-541-5700

MANUFACTURER CODE NUMBER: 675 EFFECTIVE DATE: July 22, 2009

SECTION 2: HAZARDOUS INGREDIENTS

The products are acetic acid, glacial (99-100%) and acetic solution in water. They are corrosive and toxic with the following effects:

1. Causes chemical burns of the skin upon contact.
2. Damages mucosal linings in the respiratory tract upon inhalation of vapors. Acetic acid is not listed by NTP, IARC or OSHA as “a carcinogen”.

The Chemical Abstract Registry Number for Acetic Acid is 64-19-7.

SECTION 3: PHYSICAL DATA

	40%	56%	70%	84%	99%
BOILING POINT	: 102	103	103	107	119
MELTING POINT	: -	-	-	-	16.7
SOLUBILITY IN WATER	: 100	100	100	100	100
VAPOR PRESSURE (mm Hg): at 20 C	14	14	14	13	11
VAPOR DENSITY (air = 1)	: 2.1	2.1	2.1	2.1	2.1
% VOLATILE BY VOLUME	:100	100	100	100	100
PH	: Less than 2.0				
SPECIFIC GRAVITY (H20=1) at 20 C	:1.05	1.06	1.06	1.07	1.05

APPEARANCE/ODOR : Acetic acid, glacial and solutions, are clear, colorless liquid, at room temperature, with a odor of vinegar.

Section 4: FIRE AND EXPLOSION DATA

FLASH POINT : 109 F (Glacial)
(Tag Closed Cup) 131 F (84%)
140-145 F (70%) estimate
None (56%)
None (40%)
AUTOIGNITION TEMP. 800 F
FLAMMABLE LIMITS (%) : Lower = 4 Upper = 16
EXTINGUISHING MEDIA :

Glacial acetic acid and solutions greater than 70% are combustible organic acids which, upon ignition, generate Class B organic liquids fire. Carbon dioxide, dry chemical, and alcohol-type foam are the recommended extinguishing agents. These agents act to smother the fire by forming a blanket over the fire and eliminating oxygen. Water spray or mist may be used to control acetic acid fires. Acetic acid mixes completely with water and decreases its combustibility.

If a leak or spill has not ignited, use water spray to disperse vapors and reduce flammability.

NFPA FIRE HAZARD RATING:

Health	2
Flammability	2
Reactivity	1

SPECIAL FIREFIGHTING PROCEDURES:
Fire-exposed containers should be cooled with water spray.

Firefighters should wear full protective clothing and a self-contained breathing apparatus to avoid breathing of toxic fumes (carbon monoxide, carbon dioxide) emitted when glacial acetic acid is heated to decomposition.

FIRE AND EXPLOSION HAZARD:
Vapors are heavier than air and can flow to a source of ignition.

SECTION 5: HEALTH HAZARD INFORMATION/FIRST AID

The Threshold Limit Value (8 hrs., Time Weighted Average) for acetic acid
Is 10 ppm – ACGIH.

TOXICITY DATA:

Oral LD50	3310 mg/kg (in rats)
Oral LD50	4960 mg/kg (in mice)
Oral LDLO	1200 mg/kg (in rabbit)
Dermal LD50	1060 mg/kg (in rabbit)

Inhalation	LC50	5620 ppm/1H (in mice)
Inhalation	TDLO	816 ppm/3 minutes (irritant; in humans)

Source: Registry of Toxic Effects of Chemical Substances, 1979, U.S. Department Of Health, Education and Welfare.

For acetic acid, OSHA PEL – TWA 10 ppm, 25 mg/m3.

TOXIC EFFECTS:

Vinegar is 4-6% acetic acid. Concentrated acetic acid (40-99.5%) produces severe injury to all living tissue. The reactions are similar to those which are associated with other highly corrosive compounds.

SKIN:

Acetic acid causes severe burns of the skin which may result in extensive areas of damage. Underlying structures may be involved. Delayed effects may include infection, scarring, and prolonged periods of recuperation. Death may accompany burns over major portions of the body surface.

EYES:

Acetic acid may cause severe burns and destruction of the eye and surrounding structures.

INHALATION:

Vapors and mists of acetic acid are highly corrosive to mucous membranes of the airway, producing irritation, reddening, and edema. Bronchitis, pulmonary edema, and chemical pheumonitis may occur. The post-acute phase may be complicated by infection and scarring of tissues. Death may occur.

INGESTION:

Ingestion of acetic acid leads to burns of the lining mucous membranes and deeper structure. There may be pain, vomiting, hemorrhage, and perforation of organs. Obstruction may occur promptly or as a consequence of residual scar formation. Medical conditions aggravated by overexposure: May aggravate, through irritation, disorders of the skin or respiratory tract.

Target organs: Upper respiratory tract, skin, eyes and teeth.

FIRST AID:

EYE CONTACT:

Immediately flush eyes gently with copious quantities of water for a minimum of 15 minutes. Use fingers to assure that eyelids are separated and that eye is being irrigated. Call physician.

SKIN CONTACT:

Remove contaminated clothing. Flush contaminated area with copious quantities of water for 15 minutes. Except when burn is clearly minor in degree or extent, cover involved area with clean dressing and seek medical attention promptly.

INHALATION:
Move patient immediately to uncontaminated atmosphere. Except in minor cases of exposure without symptoms, seek medical advice promptly.

INGESTION:
Do not induce vomiting. Seek medical attention promptly. If vomiting occurs, take steps to avoid aspiration of vomited material into the respiratory tract. To prevent choking, position body so that material is freely ejected. Give milk, water containing milk of magnesia or olive oil.

SECTION 6: REACTIVITY DATA

STABILITY:
Acetic acid is a stable liquid at room temperature. Glacial acetic acid solidifies at temperatures below 62F. The product reacts as an acid and when mixed with carbonates, phosphates, hydroxides, oxides and strong oxidizers, results in generation heat and emission of toxic fumes. The product reacts violently with strong alkali and amines.

INCOMPATIBILITY (SPECIFIC MATERIALS TO AVOID):
Acetic acid reacts with most metals, except aluminum and stainless steel, liberating flammable hydrogen gas. It reacts violently with chromic acid, sodium peroxide, nitric acid and other oxidizing agents with the potential to cause an explosion.

HAZARDOUS DECOMPOSITION PRODUCTS:
Toxic carbon monoxide and carbon dioxide may be emitted when glacial acetic acid is heated to decomposition or burned.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 7: SPILL, LEAK AND DISPOSAL PROCEDURES

If material is released or spilled, wear full rubber protective clothing, a self-contained breathing apparatus with a full-face mask and a face shield.

Evacuate area until vapors are dispersed. Remove sources of ignition. Completely cover spill with lime, soda ash or sodium bicarbonate to neutralize the acid (avoid prolonged breathing of carbon dioxide evolved during neutralization). Add water and mix if necessary.

Scoop up the slurry or solid mix into a glass or polyethylene container. This slurry will be a mixture of sodium acetate and sodium carbonate or bicarbonate. It may be disposed of as a solution or as the solid in a biological treatment system after consulting local sewage authorities.

The aquatic toxicity rating TLm 96 for acetic acid is 100-10 ppm.

DISPOSAL:
Glacial acetic acid may be incinerated by charging the liquid acid,

directly or after mixing with a flammable solvent, at the base of an incinerator. An afterburner is recommended to assure complete combustion.

Dissolve solid glacial acetic acid in a flammable solvent and burn as above or package in paper and burn in an incinerator.

Neutralized slurries or solutions from spills may be disposed of in a waste treatment system as described above.

SECTION 8: SPECIAL PROTECTION INFORMATION

VENTILATION:
Provide adequate ventilation to maintain vapor levels in air below 10 ppm. For airborne concentrations below 500 ppm, a gas mask or chemical cartridge respirator equipped for organic vapors is recommended. At higher concentrations, supplied air or self-contained breathing apparatus operating in positive pressure or continuous flow mode is required. All respiratory protection should be NIOSH approved and equipped with a full facepiece.

EYE PROTECTION:
Chemical splash goggles and a face shield should be worn if self-contained air breathing apparatus is not warranted.

HAND PROTECTION:
Wear complete rubber gloves.

OTHER:
Wear complete rubber protective clothing such as an acid suit and rubber boots.

SECTION 9: SPECIAL PRECAUTIONS AND HANDLING INFORMATION

HANDLING:

ACETIC ACID, GLACIAL
CORROSIVE MATERIAL, UN 2789
DANGER
CAUSES SEVERE BURNS TO SKIN AND EYES.
REACTS VIOLENTLY WITH STRONG ALKALI
HARMFUL IF INHALED.
COMBUSTIBLE LIQUID

Do not get in eyes, on skin or on clothing. Avoid breathing vapors. Keep container close. Use with adequate ventilation. Wash thoroughly after handling. Keep away from heat, sparks, and open flame.

FIRST AID:
In case of contact, flush skin and eyes with plenty of water for 15 minutes. Call physician.

In case of fire, use carbon dioxide, dry chemical or alcohol foam. Flush spill area with water spray.

ACETIC ACID
AQUEOUS SOLUTION
CORROSIVE MATERIAL, UN 2790
DANGER

CAUSES SEVERE BURNS TO SKIN AND EYES.
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HARMFUL IF INHALED

Do not get in eyes, on skin or on clothing. Avoid breathing vapors. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Keep away from heat, sparks, and open flame.

FIRST AID:

In case of contact, flush skin and eyes with plenty of water for 15 min. Call a physician In case of fire, use carbon dioxide, dry chemical or alcohol foam. Flush spill area with water spray.

SPECIAL HANDLING:

Wear full rubber protective gear and face shield. Protect containers against physical damage.

STORAGE:

Outdoors or detached storage is preferred. Keep container tightly closed. Use only Department of Transportation (DOT) approved containers. Keep away from heat and open flames. Store above 62 F(freezing point) to avoid solidification. If frozen, thaw by carefully moving container to warm place.

SECTION 10: ADDITIONAL INFORMATION

REGULATORY CONCERNS:

Transportation of glacial acetic acid is regulated by the Department of Transportation (DOT). The proper shipping name is Acetic Acid, Glacial, Corrosive Material, UN 2789.

For aqueous solutions, the proper shipping name is RQ Acetic Acid, Aqueous Solution, Corrosive Material, UN 2790.

Substance(s) listed by California under the “Safe Drinking Water and Toxic Enforcement Act of 1986” (Proposition 65): None

In the event 1,000 or more pounds of acetic acid is discharged to navigable waters during a 24 hour period, notice of the discharge must be given immediately by calling the National Response Center at the following toll free number: 800-424-8802. Some states also require notification. Failure to notify may result in a fine and/or imprisonment (Federal Water Control Act).

All components are included in the EPA Toxic Substance Control Act Chemical Substance Inventory.

H.M.I.S.

HEALTH : 3
FLAMMABILITY: 2
REACTIVITY : 0

These rating should be used only as part of H.M.I.S. program.

EPA Reportable Quantity under CERCLA for Acetic Acid is 5,000 pounds (2,270 kg).

OSHA Hazard Communication Standard (29CFR1910.1200) hazard class: a) toxic by inhalation b) corrosive.

EPA SARA Title III hazard class: immediate health hazard.

EPA SARA Title III section 313 (40CFR372) Toxic Chemicals present in quantities greater than the “de minimis” level are: none.

Canadian WHMIS Controlled Products classification: Class D Division 2: Toxic Material, Class E Corrosive.