

MATERIAL SAFETY DATA SHEET

EXTINGUISHING MEDIA:

Use media appropriate for surrounding material. Use water spray to cool containers exposed to fire from as far a distance as possible. DO NOT get water inside containers. Generates heat upon addition of water, with possible spattering. Use water spray to absorb corrosive vapors.

SPECIAL FIREFIGHTING PROCEDURES:

SCBA recommended with a full face piece operated in pressure-demand mode or other positive pressure mode. Wear full protective clothing. Run-off may cause pollution. Dike to contain run-off for proper handling as stated in Section VII.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Negligible fire hazard when exposed to heat or flame.

FLAMMABILITY - T.D.G.R. CLASS:

Not classified as flammable or combustible

HAZARDOUS COMBUSTION PRODUCTS:

Thermal decomposition products expected to produce carbon monoxide, carbon dioxide and smoke.

EXPLOSION DATA - SENSITIVITY TO IMPACT:

No Information

EXPLOSION DATA - SENSITIVITY TO STATIC DISCHARGE:

No Information

===== SECTION V - REACTIVITY DATA =====

STABILITY:

Stable under normal temperatures and pressures.

CONDITIONS TO AVOID:

Flammable hydrogen gas may be generated upon contact with metals such as aluminum, tin and zinc.

INCOMPATIBILITY (MATERIALS TO AVOID):

Acids. This product is alkaline - avoid contact with acidic materials. Addition of water creates heat and may cause spattering. Prolonged contact with metals such as aluminum, tin, lead and zinc may produce flammable hydrogen gas.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:

Thermal decomposition products expected to produce carbon monoxide, carbon dioxide and smoke.

HAZARDOUS POLYMERIZATION:

Has not been reported to occur.

===== SECTION VI - TOXICOLOGICAL PROPERTIES =====

ROUTES OF ENTRY:

Ingestion, inhalation, skin and eyes.

INHALATION HEALTH RISKS AND SYMPTOMS OF ACUTE EXPOSURE:

Vapors are corrosive and irritating to the respiratory tract. Inhalation of mist may burn the mucous membranes of the nose and throat.

EYE CONTACT HEALTH RISKS AND SYMPTOMS OF ACUTE EXPOSURE:

Causes severe burns to eyes. Eye damage may be permanent.

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SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF ACUTE EXPOSURE:

Contact with skin can cause burns and/or irritation. The degree of damage depends upon the length of contact.

INGESTION HEALTH RISKS AND SYMPTOMS OF ACUTE EXPOSURE:

Harmful if swallowed. Ingestion may cause burns to the mouth and esophagus.

INHALATION HEALTH RISKS AND SYMPTOMS OF CHRONIC EXPOSURE:

Prolonged exposure may cause bronchial irritation, coughing, bronchial pneumonia and gastrointestinal disturbances.

EYE CONTACT HEALTH RISKS AND SYMPTOMS OF CHRONIC EXPOSURE:

Contact at low levels may cause conjunctivitis.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF CHRONIC EXPOSURE:

Repeated exposure may cause dermatitis.

INGESTION HEALTH RISKS AND SYMPTOMS OF CHRONIC EXPOSURE:

There is no data available on the chronic effects of ingestion of this material.

CARCINOGENICITY:

NTP CARCINOGEN: Not known to have any carcinogenic components.

IARC MONOGRAPHS: No

TERATOGENICITY:

No Information.

MUTAGENICITY:

No Information.

IRRITANCY:

Corrosive

SENSITIZATION:

No information.

SYNERGISTIC PRODUCTS:

N/AV

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

N/AV

ADDITIONAL INFORMATION:

N/AV

===== SECTION VII - PREVENTIVE MEASURES =====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Do not touch spilled material. Stop leak if you can without risk. For SMALL SPILLS pick up spill with vacuum equipment (alkali resistant) for disposal, or flush to holding area with water. Neutralize residues with dilute acid and rinse with water.

For LARGER SPILLS, dike far ahead of spill for later disposal. Keep unnecessary people away from area. Isolate hazard area and deny entry.

WASTE DISPOSAL METHOD:

Waste caustic must NEVER be discharged directly to sewers or surface waters. First convert to neutral salts and dilute well with water. Inform legal authorities of uncontrolled spills.

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RESOURCE CONSERVATION & RECOVERY ACT (RCRA) REQUIREMENTS:

Product is a RCRA regulated hazardous waste upon disposal. The RCRA hazardous waste number D002 refers to this materials RCRA hazardous waste characteristics of corrosivity. Comply with all Federal, State and local laws and regulations upon disposal.

CLEAN WATER ACT REQUIREMENTS:

No information.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Store in well sealed containers which are protected from physical damage. Avoid handling conditions that can lead to spills or mist formation. Drains must have retention basins for pH adjustment and neutralization of spilled materials and flushings prior to discharge. Have abundant running water available where material is stored, unloaded or handled. Store above the freezing point of water. DO NOT permit workers to handle caustic materials without proper training and proper equipment. Avoid contact with incompatible chemicals listed in Section V.

OTHER PRECAUTIONS:

N/AV

RESPIRATORY PROTECTION:

None needed for normal operating conditions.

ENGINEERING CONTROLS (VENTILATION):

Provide natural or mechanical ventilation to minimize exposure, especially where possibility of mist formation exists. If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult NFPA Standard 91 for design exhaust systems.

PROTECTIVE GLOVES:

Employee must wear appropriate protective gloves to prevent contact with this substance.

EYE PROTECTION:

Employee must wear splash proof and/or dust-resistant safety goggles with a full face-shield to prevent eye contact with this substance. DO NOT WEAR CONTACT LENSES.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

Apron or protective clothing, and rubber boots (tops covered by apron or clothing to prevent entrance of material).

WORK/HYGIENIC PRACTICES:

Where there is any possibility that an employee's eyes may be exposed to this substance, the employer shall provide an eye-wash fountain within the immediate work area for emergency use.

SHIPPING CLASSIFICATIONS:

TDG REGULATION (TRANSPORT DANGEROUS GOODS Schedule 1):

UN 1719, Caustic Alkali Liquids, N.O.S., (Contains Sodium Hydroxide/Potassium Hydroxide) Class 8, PG II

U.S.DOT CLASSIFICATION (49 CFR 172.101):

UN 1719, Caustic Alkali Liquids, N.O.S., (Contains Sodium Hydroxide/Potassium Hydroxide) Class 8, PG II

U.S. SUPERFUND AMENDMENTS & REAUTHORIZATION ACT (SARA) REQUIREMENTS:

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SARA TITLE III (Sections 302 & 304 Extremely Hazardous Substances):

CESCO A112S contains sodium hydroxide and potassium hydroxide, which are considered CERCLA Hazardous substances. CESCO A112S has a reportable quantity (RQ) of 18,400 lbs based on the potassium hydroxide content and/or 39,000 lbs based on the sodium hydroxide content.

SARA TITLE III (Sections 311 & 312 Hazardous Chemicals):

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories: An Immediate (Acute) Health Hazard. A Reactive Hazard.

SARA TITLE III (Section 313 Toxic Release Inventory):

The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III, requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDS's that are copied or distributed for this material. Refer to Section II, HAZARDOUS INGREDIENTS/SARA III INFORMATION, the components that are subject to reporting are designated by an asterix (*).

===== SECTION VIII - FIRST AID MEASURES =====

INHALATION:

Remove from exposure to mist. If breathing has stopped, provide artificial respiration. Keep the person warm and at rest. OBTAIN IMMEDIATE MEDICAL ATTENTION.

EYE CONTACT:

Wash eyes immediately with plenty of running water for 15-20 minutes, or until no evidence of chemical remains, including under eyelids. Remove any contact lenses at once. Speed in beginning the eyewash is essential if permanent injury is to be avoided. In case of chemical burns, apply sterile bandages loosely to eyes without medication. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN CONTACT:

Flush contaminated skin with water for 15 minutes, or until no evidence of chemical remains. Remove contaminated clothing under the shower immediately. Prolong washing in serious cases until doctor arrives. GET MEDICAL CARE FOR EVIDENCE OF BURNING. If evidence of chemical burn exists, cover with sterile, dry dressing. Bandage securely, but not too tightly.

INGESTION:

Do not induce vomiting. Drink a large glass of water. Treat symptomatically and supportively. GET MEDICAL ATTENTION IMMEDIATELY. CAUTION: IF UNCONSCIOUS OR HAVING TROUBLE BREATHING OR IN CONVULSIONS, DO NOT INDUCE VOMITING OR GIVE WATER.

===== SECTION IX - PREPARATION INFORMATION =====

MSDS REVISION DATE: 11/12/08

NAME OF PREPARER: Environmental, Health & Safety Department.

CONTACT PHONE: (360) 733-7478

DISCLAIMER:

IMPORTANT: The information and data herein is based on available data. Buyer assumes all risk of use, storage and

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