

MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 2 Flammability = 0 Reactivity = 0
HMIS RATING: Health = 2 Flammability = 1 Reactivity = 0

SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (0704G)

Manufacturer's Name: HILLYARD INDUSTRIES**Address:** 302 North Fourth Street
St. Joseph, MO 64501**Product Name:** RE-JUV-NAL**Date Prepared:** October 12, 2005**Prepared by:** Regulatory Affairs Department**Emergency Telephone No.:** (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)**Other information calls:** (816) 233-1321 (Ext. 8285)<http://www.hillyard.com>

SECTION II -- INGREDIENTS/IDENTITY INFORMATION

Components

(Specific Chemical Identity:

Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Didecyl dimethyl ammonium chloride	7173-51-5	not established	N/A	N/A	2.54
n-Alkyl (C ₁₄ 50%, C ₁₂ 40%, C ₁₆ 10%) dimethyl benzyl ammonium chloride	8001-54-5	not established	N/A	N/A	1.69
Octyl dimethyl amine oxide	2605-78-9	not established	N/A	N/A	---
Edtate Disodium	139-33-3	not established	N/A	N/A	---
Deionized water	7732-18-5	none	N/A	N/A	---

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 210°F **Specific Gravity (H₂O = 1):** 25°C = 1.00 & 39°C = 1.00
Vapor Pressure (mm Hg.): 17.6 **Percent Volatile by Volume (%):** 94.7
Vapor Density (AIR = 1): 0.6 **Evaporation Rate (ethyl ether = 1):** slower than 1
Solubility in Water: complete **Appearance and Odor:** clear, reddish-orange liquid; floral odor
pH of concentrate: 7.2 - 8.2

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: >200°F (Tag Closed Cup) **Flammable Limits:** LEL = Not applicable UEL = Not applicable
Extinguishing Media: Foam, alcohol foam, carbon dioxide, dry chemical, water
Special Fire Fighting Procedures: Must wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.
Unusual Fire and Explosion Hazards: Products of combustion are toxic.

SECTION V -- PHYSICAL HAZARDS

Stability: Stable **Conditions to Avoid:** N/A
Incompatibility (Materials to Avoid): Strong oxidizing and reducing agents.
Hazardous Decomposition Products or Byproducts: Thermal decomposition may produce toxic vapors/fumes of Hydrogen chloride, amines, and other organic materials, and oxides of carbon and nitrogen.
Hazardous Polymerization: Will not occur **Conditions to Avoid:** None known to Hillyard

SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? yes Skin? yes Eye? Yes Ingestion? yes

HEALTH HAZARDS (1. Acute and 2. Chronic)

1. From previous experience with a 2 oz. per gallon alkaline quat, the oral LD50 (rat): 1850 mg/kg; Dermal LD50 (Rabbit): 4430 mg/kg.; Eye: Diluted product 1:64 (rabbit) essentially non-irritating; Skin irritation: Diluted product 1:64 (rabbit) non-irritating. Inhalation of fine fog mist can cause irritation of mucous membranes. Fine fog mist application is not recommended. 2. None known to Hillyard.

Chemical listed as Carcinogen or Potential Carcinogen:**National Toxicology Program =** No **I.A.R.C. Monographs =** No **OSHA =** No**Signs and Symptoms of Exposure:** Causes irreversible eye damage. Do not get in eyes or clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Avoid contact with skin. Harmful if inhaled. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

SECTION VI -- HEALTH HAZARD DATA continued:

Medical Conditions Generally Aggravated by Exposure: None known to manufacturer.

Emergency and First Aid Procedures: **If in eyes:** Hold eye open and rinse slowly and gently with water for at least 15-20 minutes. **If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. **If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment. **NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Caution. Floors may become slippery. Wear appropriate protective gear and respiratory protection where mist or vapors of unknown concentrations may be generated (self-contained breathing apparatus preferred). Dike and contain spill with inert material (sand, earth, etc.) and transfer the liquid and solid separately to containers of recovery or disposal. Keep spill out of sewers and open bodies of water.

Waste Disposal Method: Dispose of in compliance with all federal, state and local laws and regulations. Incineration is the preferred method.

Precautions To Be Taken In Handling And Storing: Keep away from children.

Other Precautions: Store in original container in areas inaccessible to children. Open dumping is prohibited. Do not reuse empty container. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning & Community Right to Know Act of 1986 and 40 CFR Part 372.

SECTION VIII -- CONTROL MEASURES

Ventilation: In processes where mists or vapors must be generated, proper ventilation must be provided in accordance with good ventilation practices. **Respiratory Protection (Specify Type):** In processes where mists or vapors may be generated, a NIOSH/MSHA jointly approved respirator is advised in the absence of proper environmental controls. **Protective Gloves:** Rubber or neoprene, when needed, to prevent skin contact with concentrate. **Eye Protection:** Wear chemical splash goggles where there is a potential for eye contact. Use safety glasses with side shields under normal use conditions. **Other Protective Clothing or Equipment:** Eye wash; safety shower, protective clothing (long sleeves, coveralls or other, as appropriate), when needed to prevent skin contact with concentrate. **Work / Hygienic Practices:** Wash hands thoroughly after handling.

SECTION IX -- TRANSPORTATION INFORMATION

Applicable regulations: 49 CFR = No; IMCO = No; IATA = No

Proper shipping name: Cleaning Compound; **UN No.:** Not applicable; **Limited Qty.:** Not applicable;

Hazard Class: Not applicable

Labels required: Not required **Exception:** Not applicable

EPA Hazardous waste number/code: Not listed

Hazardous waste characteristics: **Ignitability** = Not applicable; **Corrosivity** = Not applicable; **Reactivity** = Not applicable

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET. The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate. THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.