

MATERIAL SAFETY DATA SHEET

EPA Reg. No. 6836-77-1658

EPA Est. No. 1658-MO-1

NFPA RATING: Health = 3 Flammability = 0 Reactivity = 0
 HMIS RATING: Health = 3 Flammability = 1 Reactivity = 0

SECTION I - IDENTITY AND MANUFACTURER'S INFORMATION (538N02A)

Manufacturer's Name: HILLYARD INDUSTRIES Product Name: Q.T. Plus
 Address: 302 North Fourth Street Date Prepared: January 4, 2012 (version 2)
 St. Joseph, MO 64501 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)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Common Name(s)					
N,N-Dialkyl (C ₈₋₁₀)-N,N-dimethylammonium Chloride Didecyl dimethyl ammonium chloride	68424-95-3	N.E.	N.A.	N.A.	6.51
N-Alkyl (C12-16) dimethylbenzylammonium chloride	68424-85-1	N.E.	N.A.	N.A.	4.34
Alcohols, C9-11, Ethoxylated	68439-46-3	N.E.	N.A.	N.A.	< 5.0
Tetrasodium Ethylenediamine tetraacetate	64-02-8	N.E.	N.A.	N.A.	---
Ethanol ⁽¹⁾	64-17-5	1000 ppm	1000 ppm	N.A.	1-4
Deionized water	7732-18-5	none	N/A	N.A.	---

⁽¹⁾ Regulated by OSHA and the following states: CA, ID, MA, MN, PA, WA.

VOC (Concentrate) = 1.36%; VOC (Minimum Dilution) = 0.01%

*SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 209°F Specific Gravity (H₂O = 1): 25°C = 1.01 *Density = 8.41 lbs/gl.
 Vapor Pressure (mm Hg.): 17.8 *Percent Volatile by Weight (%): 80 - 81%
 Vapor Density (AIR = 1): 0.6 Evaporation Rate (ethyl ether = 1): slower than 1
 Solubility in Water: complete Appearance and Odor: clear, yellow liquid; lemon odor
 *pH of concentrate: 12 - 13.5

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash point: >200°F (Tag Closed Cup) Flammable Limits: LEL = Not applicable UEL = Not applicable
 Extinguishing Media: 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: None known
 Incompatibility (Materials to Avoid): None known
 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 Corrosive. Causes irreversible eye damage and skin burns. Do not get in eyes, on skin, or on clothing. Harmful if swallowed or if absorbed through the skin. Wash thoroughly with soap and water after handling. Product produces severe eye and skin burns in the concentrate. This product has an Oral LD50 (rat) = 1650 mg/kg.; and a dermal LD50 (rabbit) = 1870 mg/kg. The skin irritation (rabbit) = severe irritant (primary irritation index of 8.0; eye irritation (rabbit) = severe irritant (primary irritation index = 110). The product is a DOT Corrosive upon skin testing. 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: Based upon available animal toxicity information, it is anticipated that this material will be corrosive to the skin and eyes upon direct or prolonged contact. Solvent vapors or mists of products can produce irritation of mucous membranes. Ingestion can produce immediate burning pain in the mouth, throat, and abdomen; severe swelling of the larynx; skeletal muscle paralysis affecting the ability to breathe; circulatory shock; and/or convulsions. May be fatal. Exposure to ethyl alcohol concentrations of over 1,000 ppm may cause headaches, irritation of the eyes, nose and throat, and, if continued for long period of time drowsiness and lassitude, loss of appetite and inability to concentrate.

SECTION VI - HEALTH HAZARD DATA continued:

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

Emergency and First Aid Procedures: **Eyes:** Flush with large amounts of running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. Get immediate medical attention. If physician is not available, flush for additional 15 minutes and then transport victim to medical care. **Skin:** Wash with large amounts of running water, and soap if available, for 15 minutes; Remove contaminated clothing and shoes. Get immediate medical attention. Wash clothing and decontaminated shoes before reuse. **Ingestion:** If swallowed, immediately give 3-4 glasses of milk (if unavailable, give water). DO NOT induce vomiting. If vomiting occurs, give fluids again. Get immediate medical attention. Have physician determine if patient's condition allows for induction of vomiting or evacuation of the stomach. Do not give anything by mouth to a convulsing or unconscious person. **Inhalation:** Remove from area to fresh air. If not breathing, clear airway and start artificial respiration. If victim is having trouble breathing, give supplemental oxygen if available. Get immediate medical attention. **NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage. Supplemental oxygen and other measures to support breathing may be needed to combat circulatory shock. Persistent convulsions may be controlled by the cautious intravenous injection of a short acting barbiturate drug.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Danger! Corrosive material. Floors may become slippery. Wear appropriate protective equipment and NIOSH/MSHA approved respirator 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: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. 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):** Where mist or vapors are generated by the process or if recommended TWA/TWA for ethyl alcohol is exceeded, 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. **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.

Precautions for storage and handling: Store at temperatures below 140°F. Keep containers closed until used. Do not contaminate drinking water, food or feed by storage or disposal.

SECTION IX - TRANSPORTATION INFORMATION

Applicable regulations: DOT = Yes; IMCO = Yes; IATA = Yes

Proper shipping name (Gallon Boxes) for U.S. Highway: Consumer Commodity ORM-D

Proper shipping name (5 & 55 Gallon Drums) for U.S. Highway: Disinfectants, Corrosive Liquid, N.O.S. (N,N-Dialkyl -N,N dimethyl ammonium chloride; N-alkyl dimethyl benzyl ammonium chloride), 8, UN 1903, PG III

UN No.: UN1903

Limited Qty.: not applicable

Hazard Class: 8

Label required: Not required on gallon boxes by highway; 5 & 55 gallon drum = Corrosive Label

DOT Exception: Not applicable

EPA Hazardous waste/number code: Not listed

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

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