Product ID:CITRIC ACID 14548 MSDS Date:02/16/1998 FSC:6810 NIIN:01-456-4688 Status Code:A MSDS Number: CJDLV === Responsible Party === Company Name: HACH CO Address:100 DAYTON RD Box:907 City:AMES State:IA ZIP:50010-6402 Country:US Info Phone Num:800-227-4224/515-232-2533 Emergency Phone Num:303-623-5716 Resp. Part y Other MSDS Num.:M00072 CAGE:4T252 === Contractor Identification === **Company Name: HACH COMPANY** Address:100 DAYTON RD. Box:907 City:AMES State:IA ZIP:50010 Country:US Phone:800-227-4224 Contract Num:SP0450-98-M-C037 CAGE:4T252

Ingred Name:CITRIC ACID CAS:77-92-9 RTECS #:GE7350000 = Wt:100.

LD50 LC50 Mixture:LD50 ORAL RAT 6730MG/KG(LSIGHTLY TOXIC) Routes of

Entry: Inhalation:YES Skin:YES Ingestion:YES Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO Health Hazards Acute and Chronic: THIS PRODUCT MAY BE IRRITATING TO EYES, SKIN, & RESPIRATORY TRACT. Explanation of Carcinogenicity:CANCER INFO:NOT APPLICABLE. Effects of Overexposure: MAY CAUSE SEVERE EYE & MODERATE SKIN IRRIT. MAY CAUSE RESP TRACT IRRIT. CHRONIC OVEREXPO MAY CAUSE EFFECTS DUE TO AGBILITY TO CITRIC ACID TO CHELATE METALS, WHICH COULD IMPAIR BODY'S ABILITY TO ABSORB CA L CIUM AND IRON. Medical Cond Aggravated by Exposure: PRE-EXISTING EYE, SKIN, AND RESPIRATORY TRACT CONDITIONS. TARGET ORGANS: NOT DETERMINED. First Aid:5. === Fire Fighting Measures === Extinguishing Media:WATER, CARBON DIOXIDE, OR DRY CHEMICAL. Unusual Fire/Explosion Hazard: POTENTIALLY EXPLOSIVE REACTIN WITH METAL NITRATES.EMITS TOXIC FUMES OF CO AND CO2. = Neutralizing Agent: Handling and Storage Precautions: STORE TIGHTLY CLOSED IN COOL DRY PLACE. Other Precautions: AVOID CONTACT W/EYES AND SKIN.DO NOT BREATHE DUST.WASH THOROUGHLY AFTER HANDLING. Ventilation: ADEQUATE VENTILATION. Protective Gloves: RUBBER GLOVES. Eye Protection:LAB GRADE GOGGLES.

Other Protective Equipment:LAB COAT.

Work Hygienic Prac

tices:AVOID CONTACT W/EYES AND SKIN.DO NOT BREATHE DUST.WASH THOROUGHLY AFTER HANDLING. Supplemental Safety and Health

HCC:N1 Melt/Freeze Pt:=153.C, 307.4F Spec Gravity:1.54 pH:0.1 N SOLN 2.2 Solubility in Water:60%@20C Appearance and Odor:SOLID, COLORLESS CRYSTALLS; WITHOUT ODOR Corrosion Rate:ALUM&STEEL NA

Stability Indicator/Materials to Avoid:YES OX IDIZERS. POTENTIALLY EXPLOSIVE REACTION IN CONTACT W/METAL NITRATES. Stability Condition to Avoid:EXPOSURE TO FLAMES, MOISTURE, OXIDIZERS. POTENTIALLY EXPLOSIVE REACTION IN CONTACT WITH METAL NITRATES. Hazardous Decomposition Products:EMITS ACRID SMOKE AND FUMES IN FIRE.

Waste Disposal Methods:DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

===== MSDS Transport Information ====

Transport Information:DOT/ICAO/IMO PROPER SHIPPING NAME:NOT CURRENTLY REGULATED.HAZ CLASS/ID/GROUP:NA.

SARA Title III Information:NOT LISTED.

Disclaimer (provided with this information by the compiling agencies): This information is formulated for use by elements

of the Department

of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.