Product ID:SULFURIC ACID STANDARD SOLUTION 0.030 N, CAT #413 MSDS Date:04/17/1995 FSC:6810 NIIN:00-798-9821 Status Code:A MSDS Number: CKBQW === Responsible Party === Company Name: HACH COMPANY Box:389 City:LOVELAND State:CO ZIP:80539 Country:US Info Phone Num:970-669-3050 Emerge ncy Phone Num:303-623-5716 Resp. Party Other MSDS Num.: M00585 CAGE:91224 === Contractor Identification === Company Name: HACH CO Address:5600 LINDBERGH DR Box:389 City:LOVELAND State:CO ZIP:80539 Country:US Phone:970-669-3050/ 303-623-5716 Contract Num:SP0450-00-M-D450 CAGE:91224

Ingred Name:METHYL ALCOHOL CAS:67-56-1 RTECS #:PC1400000 Minumum % Wt:15. Maxumum % Wt:25. OSHA PEL:260 MG/M3;200 PPM ACGIH TLV:262 MG/M3;200 PPM ACG IH STEL:328 MG/M3;250 PPM EPA Rpt Qty:5000 LBS DOT Rpt Qty:5000 LBS

Ingred Name:SULFURIC ACID CAS:7664-93-9 RTECS #:WS5600000 &It; Wt:.1 OSHA PEL:1 MG/M3 ACGIH TLV:1 MG/M3 ACGIH STEL:3 MG/M3 EPA Rpt Qty:1000 LBS DOT Rpt Qty:1000 LBS

Ingred Name:WATER CAS:7732-18-5 RTECS #:ZC0110000 Minumum % Wt:75. Maxumum % Wt:85.

LD50 LC50 Mixture:NONE REPORTED. Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES **Reports of Carcinoge** nicity:NTP:NO IARC:NO OSHA:NO Health Hazards Acute and Chronic: METHANOL IS A CUMULATIVE POISON. METHANOL MAY CAUSE VISUAL IMPAIRMENT AND POSSIBLY BLINDNESS BY REPEATED OR PROLONGED EXPOSURE. MAY BE FATAL OR CAUSE BLINDNESS IF SWALLOWED. CAN NOT BE MADE NONPOISION OUS . VAPOR HARMFUL. HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION. TARGET ORGANS: OPTIC NERVE, CENTRAL NERVOUS SYSTEM, CARDIOVASCULAR SYSTEM. Explanation of Carcinoge nicity: CONTAINS AN EXPERIMENTAL TERATOGEN. Effects of Overexposure: EYE: MAY CAUSE IRRITATION. SKIN: MAY CAUSE **IRRITATION. SKIN: HARMFUL IF ABSORBED THROUGH THE SKIN. INGESTION:** TOXIC CANNOT BE MADE NON-TOXIC. METHANOL MAY CAUSE IRRITATIONOF EYES, VISUAL IMPAIRMENT OR BLINDNESS, CAUSES CARDIVASCULAR EFFECTS SUCH AS CARDIAC DESPRSSION AND BLOOD PRESSURE CHANGES.CAUSES CENTRAL NERVOUS SYSTEM DEPRESSION, SYMPTOM MAY INCLUED:

DRUNKENNESS, DROWSINESS, DIZZINESS, LIGHTH EADEDNES

UNCONSCIOUSNESS AND COMA. MAY CAUSE HEADACHE WEAKNESS NAUSEA VOMITING DEATH.INHALATION: METHANOL MAY CAUSE HEADACHE, WEAKNESS, NAUSEA, VOMITING.

Medical Cond Aggravated by Exposure:PRE-EXISTING SKIN CONDITIONS AND EYE CONDITIONS.

First Aid: EYE CONTACT: IMMEDIATELY FLUSH EYES WITH WATER FOR 15 MINUTES. CALL PHYSICIAN. SKIN CONTACT: WASH SKIN WITH PLENTY OF WATER FOR 15 MINUTES. CALL PHYSICIAN IF IRRI TATION DEVELOPS. INGESTION: CALL PHYSI CIAN IMMEDIATELY. ONLY INDUCE VOMITING AT THE INSTRUCTIONS OF A PHYSICIAN. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. INHALATION: REMOVE TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NECESS ARY. CALL PHYSICIAN. Flash Point Method:CC Flash Point:=54.4C, 130.F Autoignition Temp:Autoignition Temp Text:ND Lower Limits:ND Upper Limits:ND Extinguishing Media:WATER, C ARBON DIOXIDE AND DRY CHEMICAL. Fire Fighting Procedures: AS IN ANY FIRE, WEAR SELF-CONTAINED BREATHING APPARATUS PRESSURE-DEMAND AND FULL PROTECTIVE GEAR. Unusual Fire/Explosion Hazard:FLAMMABLE LIQUID. DO NOT EXPOSE TO FLAMES. DO NOT EXPOSE TO SPARKS OR OTHER IGNITION SOURCES. MAY REACT VIOLENTLY WITH: STRONG OXIDIZERS. Spill Release Procedures: RELEASES OF THIS MATERIAL MAY CONTAMINATE THE ENVIRNMENT. REMOVE A LL COMBUSTIBLE MATERIAL FROM SPILL AREA. REMOVE ALL IGNITION AND SPARK-CREATING SOURCES FROM THE SPILL AREA. COVER

SPILLED LIQUID WITH A COMMERCIALLY AVAILABLE FLAMMABLE LIQUID SORBENT SUCH AS VAPOR BARRIER BLANKET OR ACTIVATED CAARBON TO ABOID EVOLUTION OF FUMES. VAPORS MAY TRAVEL TO A SOURCE OF IGNITION AND FLASH BACK.

Neutralizing Agent:NO DATA PROVIDED BY RESPONSIBLE PARTY.

Handling and Storage Precaut

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ions:AVOID CONTACT WITH EYES, SKIN AND CLOTHING. DO NOT BREATHE MIST OR VAPORS. WASH THOROUGHLY AFTER AHDNLING. MAINTAIN GENERAL INDUSTRIAL HYGIENE PRACTICES WHEN USING THIS PRODUCT.. STORAGE: KEEP AWAY FR OM SPARKS, FLAMES AND OTHE IGNITION SOURCES. PROTECT FROM HEAT. Other Precautions: SPILL OR RELEASE: MAY BE IGNITED BY: HEAT SPARKS, OR FLAMES. MATERIAL WILL FLOAT ON WATER CREATING A FIRE HAZARD. DIKE THE MATERIAL TO CREATE A BARRIER TO COMBUSTIBLES. MATERIAL CONTAINS A COMPONENT W HICH IS REGULATED AS A HAZARDOUS AIR POLLUTANT. PRODUCT IS REGU-LATED AS RCRA HAZARDOUS WASTE. Respiratory Protection:LABORATORY FUME HOOD. Ventilation: GENERAL VENTILATION Protective Gloves: DISPOSABLE LATEX GLOVES. Eye Protection: SAFETY GLASSES WITH TIP AND SIDE SHIELDS. Other Protective Equipment:LAB COAT Work Hygienic Practices: MAINTAIN GENERAL INDUSTRIAL HYGIENE PRACTICES WHEN USING THIS PRODUCT. W ASH THOROUGHLY AFTER HANDLING. Supplemental Safety and Health AVOID CONTACT WITH: EYES, SKIN AND CLOTHING. SO NOT BREATHE: MIST/VAPOR. WASH THOROUGHLY AFTER HANDLING. KEEP AWAY FROM: SPARKS, FLAMES AND OTHER IGNITION SOURCES. PROTECT FROM HEAT. HCC:F4 Boiling Pt:=82.C, 179.6F Melt/Freeze Pt:M.P/F.P Text:ND Vapor Pres:ND Vapor Density:ND Spec Gravity:0.963 pH:1.7 Evaporation Rate & amp; Reference:1.35(WATER=1) Solubilit y in Water:SOLUBLE Appearance and Odor: CLEAR, COLORLESS LIQUID, ALCOHOLIC ODOR. Percent Volatiles by Volume:ND Corrosion Rate: 0.0173 IN/YR STEEL

Stability Indicator/Materials to Avoid:YES NONE REPORTED Stability Condition to Avoid:STABLE WHEN STORED UNDER PROPER CONDITIONS. AVOID CONTACT WITH HEAT, SPARKS, OPEN FLAMES OR OTHER IGNITION SOURCES. Hazardous Decomposition Products:TOXIC FUMES OF CARBON MONOXIDE. Conditions to Avoid Polymerization: WILL NOT OCCUR.

Toxicological Information:PRODUCT TOXICOLOGICAL DATA: LD50: NONE REPORTED. LC50: NONE REPORTED. DERMAL TOXICITY: METHANOL: SKIN MONKEY LDLO=393 MG/KG; SKIN RABBIT LD50=15800 MG/KG. SKIN & EYE IRRITATION DATA: NONE REPORTED. MU TATION DATA: METHANOL: DNA INHIBITION-HUMAN-LYMPHOCYTES-300 MMOL/L; DNA DAMAGE-ORAL RAT-10UG/KG. REPRODUCTIVE EFFECTS DATA: METHANOL:INHALATION MOUSE

1500 PPM/6H SPECIFIC DEVELOPMENT ABNORMALITIES-CEN TRAL NERVOUS SYSTEM. INHALATION RAT 10000 PPM/7HR EMBRYO OR FETUS-FETOTOXICITY. INGREDEINT DATA: METHANOL: ORAL HUMAN LDLO=143 MG/KG; ORAL RAT LD50=5628 MG/KG. INHALATION RAT LC50=64000 PPM/4HR.

Ecological:PRODUCT ECOLOGICAL DATA AVAILABLE FOR THIS PRODUCT: NO ECOLOGICAL DATA AVAILABLE FOR THIS PRODUCT. INGREDIENT ECOLOGICAL DATA: NO ECOLOGICAL

DATA AVAILABLE FOR THE INGREDIENTS OF THIS PRODUCT.

Waste Disposal Methods: ELIMINATE ALL SOURCES OF IGNITION. DO NOT BREATHE THE FUMES. USE ONLU NON-SPARKING TOOLS. INCINERATE MATERIAL AT AN E.P.A. APPROVED HAZARDOUS WASTE FACILITY. EMPTY CONTAINERS: RINSE THREE TIMES WITH A ND APPROPTIATE SOLVENT. DISPOSE OF EMPTY CONTAINER AS NORMAL TRASH.

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Transport Information: US DOT PROPER SHIPPING NAME : ALCOHOL, N.O.S. (