HARCROS CHEMICALS INC. -- 11024 PROPYLENE GLYCOL USP ________ MSDS Safety Information _____ MSDS Date: 05/31/1996 MSDS Num: CJGXR Product ID: 11024 PROPYLENE GLYCOL USP MFN: 01 Responsible Party Cage: 3H606 Name: HARCROS CHEMICALS INC. Address: 5200-SPEAKER ROAD Box: 2383 City: KANSAS CITY KS 66106-1095 Info Phone Number: 913-321-3131 Emergency Phone Number: 913-321-3131 Chemtrec IND/Phone: (800)424-9300 Review Ind: Y Published: Y Contractor Summary ______ Cage: 3H606 Name: HARCROS CHEMICALS INC. Address: 5200-SPEAKER ROAD Box: 2383 City: KANSAS CITY KS 66106-1095 Phone: 913-321-3131 _____ Ingredients ______ Cas: 57-55-6 RTECS #: TY2000000 Name: PROPYLENE GLYCOL 1,2-PROPANEDIOL Percent by Wt: 100. _____ Health Hazards Data ______ Route Of Entry Inds - Inhalation: YES Skin: YES Ingestion: YES Effects of Exposure: EYES/SKIN: MAY CAUSE IRRITATION. INHALATION: IRRITATION. OVEREXPOSURE MAY CAUSE ADVERSELY AFFECTS TO FUNCTIONS & ORGANS. Signs And Symptions Of Overexposure: IRRITATION, REDNESS, DEFATTING, HEADACHE, NAUSEA, DROWSINESS, DIARRHEA First Aid: EYES/SKIN: IMMEDIATELY FLUSH W/PLENTY OF WATER FOR 15 MINS. INHALATION: REMOVE TO FRESH AIR. GIVE CPR/OXYGEN IF NECESSARY. INGESTION: DON'T INDUCE VOMITING. RINSE MOUTH W/WATER. DILUTE STOMACH CONTENT S BY DRINKING WATER. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT BREATHING VOMIT INTO LUNGS. OBTAIN MEDICAL ATTENTION IN ALL CASES. Handling and Disposal _____ Spill Release Procedures: SWEEP, SHOVEL/PICK UP/CONTAIN & RETURN TO DRY, CLEAN CONTAINER. FLUSH AREA W/WATER. Waste Disposal Methods: MATERIAL THAT CANNOT BE USED/CHEMICALLY REPROCESSED SHOULD BE DISPOSED OF AT AN APPROVED FACILITY IAW/ANY APPLICABLE REGULATIONS UNDER THE RESOURCE CONSERVATION & RECOVERY ACT. DISPOSE OF IN ACCORDANC E W/LOCAL, STATE & FEDERAL REGULATIONS. Handling And Storage Precautions: KEEP CONTAINER CLOSED WHEN NOT IN USE. STORE IN A COOL, DRY PLACE. STORE IAW/NFPA REQUIREMENTS. KEEP OUT OF REACH OF CHILDREN. USE ONLY W/ADEQUATE VENTILATION. WEAR PROTECTIVE CLOTHING WHEN HANDLING. Other Precautions: DON'T GET IN EYES. DON'T BREATHE VAPOR/MIST. DON'T SWALLOW. THIS CONTAINER HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINER CONTAINS PRODUCT RESIDUES; VAPOR/LIQUID, ALL LABELED HAZARD PRECAUTIONS MUST BE OBSERVED. Fire and Explosion Hazard Information _____ Flash Point Method: TCC Flash Point: >101.1C, 214.F Lower Limits: 2.6 Upper Limits: 12.5 Extinguishing Media: WATER SPRAY, DRY CHEMICAL, FOAM, CO2 Fire Fighting Procedures: PREVENT HUMAN EXPOSURE TO FIRE, FUMES, SMOKE & PRODUCTS OF COMBUSTION. EVACUATE NON-ESSENTIAL PERSONNEL. WEAR FULL FACE SELF CONTAINED BREATHING APPARATUS & IMPERVIOUS PROTECTIVE CLOTHING. WATER/FOAM MAY CAUSE FROTHING. USE WATER TO COOL CONTAINERS EXPOSED TO FIRE. Unusual Fire/Explosion Hazard: VAPOR MAY TRAVEL A CONSIDERABLE DISTANCE TO A

SOURCE OF IGNITION & FLASHBACK. Control Measures ______ Respiratory Protection: IF EXPOSURE LIMITS ARE EXCEEDED/IF EXPOSURE MAY OCCUR, USE A NIOSH/MSHA RESPIRATOR APPROVED FOR YOUR CONDITIONS OF EXPOSURE & IN COMPLIANCE W/OSHA REQUIREMENTS IN 29 CFR 1910.134. FOR EMERGENCIES, A N IOSH/MSHA APPROVED POSITIVE PRESSURE BREATHING APPARATUS SHOULD BE READILY AVATLABLE. Ventilation: ADEQUATE IS REQUIRED TO MINIMIZE EXPOSURE/TO MAINTAIN EXPOSURE LEVELS BELOW OSHA/ACGIH REQUIREMENTS. Protective Gloves: IMPERVIOUS Eye Protection: CHEMICAL GOGGLES Other Protective Equipment: CLEAN BODY COVERING, SAFETY SHOWER, EYE WASH FOUNTAIN, WASHING FACILITIES. Work Hygienic Practices: REMOVE/LAUNDER CONTAMINATED CLOTHING & SHOES BEFORE REUSE. Supplemental Safety and Health: ALWAYS WEAR EYE PROTECTION WHEN WORKING W/CHEMICALS. DON'T WEAR CONTACT LENSES WHEN WORKING W/CHEMICALS. ______ Physical/Chemical Properties ______ Boiling Point: >185.C, 365.F Melt/Freeze Pt: =-60.C, -76.F Vapor Pres: <0.1 Vapor Density: > 2.6 Spec Gravity: > 1.0380 PH: > 6 Solubility in Water: COMPLETE Appearance and Odor: COLORLESS TO LIGHTLY COLORED LIQUID W/MILD ODOR Reactivity Data _____ Stability Indicator: YES Materials To Avoid: NONE Hazardous Decomposition Products: CO, CO2, MISCELLANEOUS ORGANIC COMPOUNDS, SOME POSSIBLY TOXIC. Hazardous Polymerization Indicator: NO Toxicological Information ______ Ecological Information ______ MSDS Transport Information ______ ______ Regulatory Information _____ _____ Other Information ______ Other Information: THE INFORMATION PROVIDED IN THIS MATERIAL SAFETY DATA SHEET HAS BEEN OBTAINED FROM SOURCES BELIEVED TO BE RELIABLE. HARCROS CHEMICAL INC PROVIDES NO WARRANTIES, EITHER EXPRESSED/IMPLIED & ASSUMES NO R ESPONSIBILITY FOR THE ACCURACY/COMPLETENESS OF THE DATA CONTAINED HEREIN. THIS INFORMATION IS OFFERED FOR YOUR INFORMATION, CONSIDERATION & INVESTIGATION. YOU SHOULD SATISFY YOURSELF THAT YOU HAVE ALL CURRENT DATA RELEVANT TO YOUR PARTICULAR USE. HARCROS CHEMICAL INC KNOWS OF NO MEDICAL CONDITION, OTHER THAN THOSE NOTED ON THIS MATERIAL SAFETY DATA SHEET, WHICH ARE GENERALLY RECOGNIZED AS BEING AG GRAVATED BY EXPOSURE TO THIS PRODUCT. HAZCOM Label _____ Product ID: 11024 PROPYLENE GLYCOL USP Cage: 3H606 Company Name: HARCROS CHEMICALS INC. Street: 5200-SPEAKER ROAD PO Box: 2383 City: KANSAS CITY KS Zipcode: 66106-1095 Health Emergency Phone: 913-321-3131 Label Required IND: Y Date Of Label Review: 06/29/1999 Status Code: A Origination Code: G 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

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