Product ID: ZYGLO PENETRANT ZL-27A MSDS Date:05/04/1999 FSC:6850 NIIN:00-782-2740 Kit Part:Y MSDS Number: CKVMW === Responsible Party === Company Name:MAGNAFLUX Address:3624 WEST LAKE AVENUE City:GLENVIEW State:IL ZIP:60025 Country:US Info Phone Num:847-657-5300 Emergency Phone Num:847-657-5300 Resp. Party O ther MSDS Num.:ZL-27A Preparer's Name: CHERI A. STOCKHAUSEN Chemtrec Ind/Phone:(800)424-9300 CAGE:37676 === Contractor Identification === Company Name: ILLINOIS TOOL WORKS INC MAGNAFLUX DIV Address:3624 WEST LAKE AVENUE Box:City:GLENVIEW State:IL ZIP:60025 Country:US Phone:847-657-5300/ Contract Num:SP0450-00-M-D713 CAGE:37676 Company Name: ILLINOIS TOOL WORKS INC MAGNAFLUX DIV Address:3624 WEST LAKE AVENUE Box:City:GLENVIEW State:IL ZIP:60025 Country:US Phone:847-657-5300/ Contract Num:SP0450-01-D

-5313 CAGE:37676 Company Name: ILLINOIS TOOL WORKS INC MAGNAFLUX DIV Address:3624 WEST LAKE AVENUE Box:City:GLENVIEW State:IL ZIP:60025 Country:US Phone:847-657-5300/ Contract Num:SP0450-01-M-D233 CAGE:37676 Company Name: ILLINOIS TOOL WORKS INC MAGNAFLUX DIV Address:3624 WEST LAKE AVENUE Box:City:GLENVIEW State:IL ZIP:60025 Country:US Phone:847-657-5300/ Contract Num:SP0450-99-M-C622 CAGE:37676 Company Name: ILLINOIS TOOL WORKS INC MAGNAFLUX DIV Address:3624 WEST LAKE AVENUE Box:City:GLENVIEW Stat e:IL ZIP:60025 Country:US Phone:847-657-5300/ Contract Num:SP0450-99-M-NJ01 CAGE:37676 Company Name: RADIAN INTL LLC Address:8501 N MOPAC BLVD Box:201088 City:AUSTIN State:TX ZIP:78720-1088 Country:US Phone:512-419-5224 CAGE:29913

Ingred Name:WHITE MINERAL OIL (PETROLEUM) CAS:8042-47-5 RTECS #:PY8047000 Minumum % Wt:30. Maxumum % Wt:60. Other REC Limits:NONE RECOMMENDED

Ingred Name:ISODECYL DIPHENYL PHOSPHATE CAS:29761-21-5 M inumum % Wt:30. Maxumum % Wt:60. Other REC Limits:NONE RECOMMENDED

Ingred Name:CASTOR OIL CAS:8001-79-4 RTECS #:FI4100000 Minumum % Wt:10. Maxumum % Wt:30. Other REC Limits:NONE RECOMMENDED

Ingred Name:ISOBUTANE (PROPELLANT) CAS:75-28-5 RTECS #:TI4300000 = Wt:30. OSHA PEL:1000 PPM ACGIH TLV:NOT AVAILABLE

LD50 LC50 Mixture:NOT PROVIDED Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO Health Hazards Acute and Chronic:POTENTIAL HEALTH EFFECTS: EYES: MAY

CAUSE IRRITATION. SKIN CONTACT: CAN IRRITATE BY REMOVING NATURAL SKIN OILS ON LONG OR REPEATED EXPOSURES. INHALATION: NOT SIGNIFICANT AT ROOM TEMPERATURES. WHEN HEA TED OR SPRAYED, VAPORS MAY CAUSE DIZZINESS AND NAUSEA. INGESTION: NOT SIGNIFICANT IN SMALL (MOUTHFUL) AMOUNTS. CHRONIC: NOT PROVIDED.

Explanation of Carcinogenicity:CONTAINS NO KNOWN OR SUSPECTED CARCINOGENS LISTED WITH OSHA

, IARC, NTP, ACGIH.

Effects of Overexposure:EYES: MAY CAUSE IRRITATION. SKIN CONTACT: CAN IRRITATE BY REMOVING NATURAL SKIN OILS ON LONG OR REPEATED EXPOSURES. INHALATION: NOT SIGNIFICANT AT ROOM TEMPERATURES. WHEN HEATED OR SPRAYED, VAPORS MAY CAUSE DIZZINESS AND NAUSEA. Medical Cond Aggravated by Exposure:NONE

First Aid:INHALATION: REMOVE TO FRESH AIR IF DIZZY OR NAUSEATED. EYE CONTACT: RINSE CAREFULLY UNDE

R UPPER AND LOWER EYELIDS USING PLENTY OF WATER. SKIN CONTACT: WASH OFF WITH SOAP AND WATER. USE SOOTHING LOTIO N. INGESTION: DO NOT INDUCE VOMITING. ACCIDENTAL INGESTION OF A SMALL MOUTHFUL IS NOT EXPECTED TO CAUSE SIGNIFICANT HARM. NOTE: IN ALL SEVERE CASES, CONTACT PHYSICIAN IMMEDIATELY. LOCAL TELEPHONE OPE RATORS CAN FURNISH NUMBER OF REGIONAL POISON CONTROL CENTER.

Flash Point Method: PMCC Flash Point :>93.3C, 200.F MINIMUM Lower Limits:1% Upper Limits:6% Extinguishing Media:CARBON DOXIDE, FOAM. Fire Fighting Procedures: KEEP CONTAINERS COOL WITH WATER SPRAY. DO NOT SPRAY WATER DIRECTLY ON BURNING ZL-27A. IT MAY FLOAT AND SPREAD THE FIRE. Unusual Fire/Explosion Hazard: CONDITION OF FLAMMABILITY --- BULK: HEATING ABOVE 200F IN PRESENCE OF IGNITION SOURCES. AEAROSOL: SPRAYING NEAR FLAMES OR ARCS WILL IGNITE SPRAY MIST. AEROSOL CANS MAY BURST AT TEMPERATURES OVER 130F(64 C) AND S PRAY CONTENTS INTO FIRE. Spill Release Procedures: MOP UP OR SWEEP UP WITH ABSORBENT. Neutralizing Agent:NOT RELEVANT Handling and Storage Precautions: STORE AWAY FROM HEAT SOURCES. Other Precautions: AVOID BREATHING SPRAY MIST. AVOID EYE CONTACT. AVOID REPEATED OR PROLONGED SKIN CONTACT. Respiratory Protection: RESPIRATOR WITH FILTER IF SPRAYED IN ENCLOSED, UNVENTILATED SPACE. Ventilation: USE WHERE VENTILATION WILL CARRY SPRAY MIST AWAY FROM OCCUPIED AREAS. Protective Gloves:WEAR NITRILE RUBBER GLOVES IF HAND EXPOSURE IS UNAVOIDABLE. Eye Protection: WEAR SAFETY GLASSES TO PROTECT EYES. Other Protective Equipment:NOT PROVIDED Work Hygienic Practices:NOT PROVIDED Supplemental Safety and Health EACH KIT CONTAINS THE FOLLOWING 12 OZ AEROSOL CANS: 3 EACH, CANS **INSPEC**

TION PENETRANT (MSDS SERIAL NUMBER: CKVMW); 3 EACH, CANS INSPECTION PENETRANT DEVELOPER (MSDS SERIAL NUMBER: CKWBR); AND 3 EA CH, CANS INSPECTION PENETRANT REMOVER (MSDS SERIAL NUMBER: CKVMX).

HCC:V3 NRC/State Lic Num:NOT PROVIDED Boiling Pt:=235.C, 455.F B.P. Text:MINIMUM (BULK) Melt/Freeze Pt:M.P/F.P Text:NOT PROVIDED Decomp Temp:Decomp Text:NOT PROVIDED Vapor Pres:3117 @ 70F/21C Vapor Density:>1(AIR=1 Spec Gr avity:0.96 pH:NEUTRAL Viscosity:NOT PROVIDED Evaporation Rate & amp; Reference: NEGLIGIBLE Solubility in Water:0% Appearance and Odor: GREEN OILY LIQUID, MILD ODOR. Percent Volatiles by Volume:30% AEROSOL Corrosion Rate:NOT PROVIDED Stability Indicator/Materials to Avoid:YES NONE Stability Condition to Avoid:NOT PROVIDED Hazardous Decomposition Products: SMOKE, SOOT, OXIDES OF CARBON AND NITROGEN. ======= Toxicol

ogical Information =================

Toxicological Information:THRESHOLD LIMIT VALUE: 5 MG/M3 FOR OILY MIST. WHIMIS INFORMATION: ACCORDING TO AVAILABLE INFORMATION, THE INGREDIENTS HAVE NOT BEEN FOUND TO SHOW REPRODUCTIVE TOXICITY, TERATOGENICITY, MUTAGENICICITY, SKIN SENSITIZATION OR SYNERGISTIC TOXIC EFFECTS WITH OTHER MATERIALS. CARCINOGENICITY: CONTAINS NO KNOWN OR SUSPECTED CARCINOGENS LISTED WITH OSHA,IARC,NTP,ACGIH. CAS#29761-21-5:ORAL,RAT LD50:15.8 G /KG

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BE SKIMMED OFF. ITS LOW BULK VAPOR PRESSURE MAY EXEMPT IT FROM VOC RESTRICTIONS. THE HYDROCARBON PROPELLANT IS NOT AN OZONE DEPLETOR 	
 Waste Disposal Methods:AS A NON-HAZARDOUS OILY WASTE, INCINERATE OR SEND TO WASTE HANDLER WHO CAN BLEND IT INTO SECONDARY FUELS. RCRA: NOT A HA ZARDOUS WASTE. U.S. EPA WASTE NUMBER: NONE. ====================================	
SEND TO WASTE HANDLER WHO CAN BLEND IT INTO SECONDARY FUELS. RCRA: NOT A HA ZARDOUS WASTE. U.S. EPA WASTE NUMBER: NONE. ====================================	======================================
ZARDOUS WASTE. U.S. EPA WASTE NUMBER: NONE. ====================================	SEND TO WASTE HANDLER WHO CAN BLEND IT INTO SECONDARY FUELS. RCRA:
NO: NONE; PACKING GROUP: NONE. IATA: AEROSOLS, FLAMMABLE, 2.1, UN1950. IMDG: AEROSOLS, FLAMMABLE, 2.1, UN1950. 	ZARDOUS WASTE. U.S. EPA WASTE NUMBER: NONE.
NO: NONE; PACKING GROUP: NONE. IATA: AEROSOLS, FLAMMABLE, 2.1, UN1950. IMDG: AEROSOLS, FLAMMABLE, 2.1, UN1950. 	======================================
SARA Title III Information:SARA TITLE III, SECTION 313: NO REPORTABLE INGREDIENTS. Federal Regulatory Information:TSCA: ALL INGREDIENTS ARE LISTED IN TSCA INVENTORY. CERCLA: NOT REPORTABLE. State Regulatory Information:CALIFORNIA PROPOSITION 65: CONTAINS NOTHING ON THE LIST. ====================================	NO: NONE; PACKING GROUP: NONE. IATA: AEROSOLS, FLAMMABLE, 2.1,
INGREDIENTS. Federal Regulatory Information:TSCA: ALL INGREDIENTS ARE LISTED IN TSCA INVENTORY. CERCLA: NOT REPORTABLE. State Regulatory Information:CALIFORNIA PROPOSITION 65: CONTAINS NOTHING ON THE LIST. ====================================	======================================
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 State Regulatory Information:CALIFORNIA PROPOSITION 65: CONTAINS NOTHING ON THE LIST. ====================================	ALL INGREDIENTS ARE LISTED IN TSCA
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 a	State Regulatory Information: CALIFORNIA PROPOSITION 65: CONTAINS
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