MATERIAL SAFETY	3M
DATA SHEET	3M Center
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DIVISION: ELECTRICAL PRODUCTS DIVISION TRADE NAME: 3M Electrical 23 Tape ID NUMBER/U.P.C.: VE-0000-2828-6 00-54007-15025-1 ISSUED: February 17, 1999 SUPERSEDES: INITIAL ISSUE DOCUMENT: 08-9491-5

_____ C.A.S. NO. PERCENT 1. INGREDIENT _____ 14807-96-6 20 - 30 TALC..... TradeSecret 15 Polyisobutylene.... - 30 ETHYLENE-PROPYLENE-1,4-HEXADIENE 25038-37-3 15 9003-07-0 5 - 30 POLYMER..... POLYPROPYLENE 9003-07-0 - 15 SOLVENT REFINEDE RESIDUAL OIL 64742-01-4 5 (PETROLEUM)..... - 15 PIPERYLENE-2-METHYL-2-BUTENE POLYMER.... 26813-14-9 1 - 10 - 10 1 CARBON BLACK..... 1333-86-4 - 10 0.1 - 1.0 organo-silicone..... Mixture antioxidant..... 119-47-1 - 2.0 0.5 0.1 - 1.0

Individual ingredients are blended into polymer matrix, therefore minimizing any potential exposure to these components.

This product contains the following toxic chemical or chemicals subject to Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately MSDS: 3M Electrical 23 Tape February 17, 1999 PAGE 2 _____ 1. INGREDIENT C.A.S. NO. PERCENT _____ the reporting requirements of Section 313 of Title III of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR Part 372: ZINC STEARATE _____ 2. PHYSICAL DATA _____ BOILING POINT:..... N/A VAPOR PRESSURE: N/A VAPOR DENSITY: N/A EVAPORATION RATE: N/A SOLUBILITY IN WATER:.... neglig. SPECIFIC GRAVITY:..... N/D PERCENT VOLATILE:..... N/A pH:.....N/A VISCOSITY:..... N/A MELTING POINT: N/D APPEARANCE AND ODOR: Roll of Tape, BLACK ROLL OF TAPE WITH LINER _____ 3. FIRE AND EXPLOSION HAZARD DATA _____ FLASH POINT:..... N/D FLAMMABLE LIMITS - LEL:..... N/D FLAMMABLE LIMITS - UEL:..... N/D AUTOIGNITION TEMPERATURE:..... N/D EXTINGUISHING MEDIA: Water spray, Carbon dioxide, Dry chemical, Foam SPECIAL FIRE FIGHTING PROCEDURES: Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head. Water may not effectively extinguish fire; however, it should be used to keep fireexposed containers and surfaces cool and prevent explosive rupture. UNUSUAL FIRE AND EXPLOSION HAZARDS: None known. No unusual fire or explosion hazards are anticipated. NFPA HAZARD CODES: HEALTH: 0 FIRE: 1 REACTIVITY: 0 UNUSUAL REACTION HAZARD: none OSHA FIRE HAZARD CLASS: Not applicable _____ Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

MSDS: 3M Electrical 23 Tape February 17, 1999 PAGE 3 _____ 4. REACTIVITY DATA _____ STABILITY: Stable INCOMPATIBILITY - MATERIALS/CONDITIONS TO AVOID: Strong Oxidizing Agents. HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur. HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Monoxide and Carbon Dioxide, Oxides of Zinc, Irritant Vapors or Gases. _____ 5. ENVIRONMENTAL INFORMATION _____ SPILL RESPONSE: Observe precautions from other sections. Collect spilled material. Place in a closed container. RECOMMENDED DISPOSAL: Dispose of waste product in a sanitary landfill. Disposal alternative: Incinerate in an industrial or commercial facility in the presence of a combustible material. ENVIRONMENTAL DATA: Not determined. **REGULATORY INFORMATION:** Volatile Organic Compounds: N/A. VOC Less H2O & Exempt Solvents: N/A. Since regulations vary, consult applicable regulations or authorities before disposal. In the event of an uncontrolled release of this material, the user should determine if the release qualifies as a reportable quantity. U.S. EPA Hazardous Waste Number = None (Not U.S. EPA Hazardous). EPCRA HAZARD CLASS: FIRE HAZARD: NO PRESSURE: NO REACTIVITY: NO ACUTE: NO CHRONIC: NO 6. SUGGESTED FIRST AID _____ EYE CONTACT: No need for first aid is anticipated. _____ Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

MSDS: 3M Electrical 23 Tape February 17, 1999 PAGE 4 _____ 6. SUGGESTED FIRST AID (continued) _____ SKIN CONTACT: No need for first aid is anticipated. INHALATION: If signs/symptoms occur, remove person to fresh air. If signs/symptoms continue, call a physician. IF SWALLOWED: No need for first aid is anticipated. _____ 7. PRECAUTIONARY INFORMATION _____ EYE PROTECTION: Avoid eye contact. SKIN PROTECTION: Avoid prolonged or repeated skin contact. RECOMMENDED VENTILATION: Use with adequate dilution ventilation. RESPIRATORY PROTECTION: Avoid breathing of thermal decomposition products. PREVENTION OF ACCIDENTAL INGESTION: Wash hands after handling and before eating. Do not ingest. RECOMMENDED STORAGE: Store in a cool place. Store out of direct sunlight. FIRE AND EXPLOSION AVOIDANCE: Keep away from heat, sparks, open flame, and other sources of ignition. HMIS HAZARD RATINGS: HEALTH: 0 FLAMMABILITY: 1 REACTIVITY: 0 PERSONAL PROTECTION: A EXPOSURE LIMITS VALUE UNIT TYPE AUTH SKIN* INGREDIENT _____ 2 MG/M3 TWA TALC..... OSHA as respirable dust TALC..... 2 MG/M3 TWA ACGIH as respirable dust Polyisobutylene..... NONE NONE NONE NONE ETHYLENE-PROPYLENE-1,4-HEXADIENE NONE NONE NONE NONE POLYMER.....

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EXPOSURE LIMITS	(con	tinued)				
INGREDIENT	VALUE	UNIT	TYPE	AUTH	SKIN	*
POLYPROPYLENE SOLVENT REFINEDE RESIDUAL OIL	NONE	NONE	NONE	NONE		
(PETROLEUM) PIPERYLENE-2-METHYL-2-BUTENE	NONE	NONE	NONE	NONE		
POLYMER	NONE	NONE	NONE	NONE		
POLYBUTYLENE	NONE	NONE	NONE	NONE		
CARBON BLACK	3.5	MG/M3	TWA	ACGIH		
CARBON BLACK	3.5	MG/M3	TWA	OSHA		
ZINC STEARATE	10	MG/M3	TWA	OSHA		
ZINC STEARATE	10	MG/M3	TWA	ACGIH		
organo-silicone	NONE	NONE	NONE	NONE		
antioxidant	NONE	NONE	NONE	NONE		
by direct contact with the substance. SOURCE OF EXPOSURE LIMIT DATA: - ACGIH: American Conference of Governme - OSHA: Occupational Safety and Health - NONE: None Established	ental In Adminis	dustrial Hy tration	gienist	s		
8. HEALTH HAZARD DATA						
EYE CONTACT: Eye contact is not expected to occur of product.	luring n	ormal use c	of the			
No adverse health effects are expected	l from e	ye contact.				
SKIN CONTACT: No adverse health effects are expected	l from s	kin contact				
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Contact with the skin during product use is not expected to result in significant irritation.

INHALATION:

This product may have a characteristic odor; however, no adverse health effects are anticipated.

Health effects from inhalation are not expected unless the product is over heated and decomposition occurs.

If thermal decomposition occurs:

Irritation (upper respiratory): signs/symptoms can include Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately soreness of the nose and throat, coughing and sneezing.

IF SWALLOWED:

Ingestion is not a likely route of exposure to this product.

No adverse health effects are expected from swallowing.

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