

**MATERIAL SAFETY DATA SHEET
FOR HEAT SHRINKABLE PRODUCTS**

PART NO: H-2(Z)

PRODUCT NAME: HEAT SHRINKABLE POLYMERIC TUBING

MANUFACTURER'S NAME: HONGSHANG HEAT SHRINKABLE MATERIALS CO., LTD

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1 HAZARDOUS INGREDIENTS/IDENTITY INFO

HEAT-SHRINKABLE POLYMERIC PRODUCTS ARE NOT HAZARDOUS DURING PROPER
INSTALLATION BUT MAY EMIT HAZARDOUS THERMAL DECOMPOSITION AND COMBUSTION
BYPRODUCTS IF OVERHEATED TO DEGRADATION.

BASE MATERIALS: POLYOLEFIN .HEAT-SHRINKABLE PRODUCTS MAY BE COATED WITH OR USED IN
CONJUNCTION WITH ADHESIVES/MASTICS WHICH ARE BASED ON OLEFIN COPOLYMERS OR
POLYAMIDES.

MATERIALS DATA SHEET

MOC's	Materials	CAS No.	Content (%)
Base material	Ethylene-vinyl acetate copolymer	24937-78-8	56
Antioxidant	Pentaerythritol tetrakis(3-(3,5-di-tertbutyl-4-hydroxyphenyl)propionate)	6683-19-8	1
Flame retardant	Magnesium hydroxide	1309-42-8	10
Flame retardant	Aluminium oxide	1344-28-1	5
Flame retardant	1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene]	84852-53-9	15
Flame retardant	Antimontrioxide	1309-64-4	8
Colorant masterbatch	Colorant masterbatch		5

2 PRODUCT APPLICATIONS

TYPICAL USED OF HEAT-SHRINKABLE POLYMERIC PRODUCTS INCLUDE PRIMARY ELECTRICAL INSULATION, EMI/RFI SHIELDING, CABLE JACKETING AND REPAIR, STRAIN RELIEF, COMPONENT ENCAPSULATION, WATERPROOFING, PACKAGING, ENVIRONMENTAL AND MECHANICAL PROTECTION, AND CABLE JOINING, SPLICING, AND TERMINATION IN COMMERCIAL AND MILITARY/AEROSPACE ELECTRONIC APPLICATIONS.

3 PHYSICAL/CHEMICAL CHARACTERISTICS

VAPOR PRESSURE (MMHG) @ 20C: NOT APPLICABLE

APPEARANCE AND ODOR: PLASTIC TUBING AND MOLDED PARTS IN A VARIETY OF SHAPES, SIZES AND COLORS. NO ODOR.

4 FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): NOT APPLICABLE

EXTINGUISHING MEDIA: CARBON DIOXIDE, WATER, DRY CHEMICAL OR FOAM.

SPECIAL FIRE FIGHTING PROCEDURES: FIREFIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS IN ENCLOSED AREAS.

UNUSUAL FIRE AND EXPLOSION HAZARDS: TOXIC FUMES MAY EVOLVE IN A FIRE.

5 REACTIVITY DATA

STABILITY: STABLE

CONDITIONS TO AVOID: AVOID OVERHEATING OF PRODUCT

INCOMPATIBILITY (MATERIALS TO AVOID):

HAZARDOUS DECOMPOSITION OR BY PRODUCTS:

HAZARDOUS POLYMERIZATION:

6 HEALTH HAZARD DATA

ROUTES OF ENTRY:

HEALTH HAZARDS (ACUTE AND CHRONIC):

IN COMMON WITH MOST ORGANIC MATERIALS, DEGRADATION AND COMBUSTION BYPRODUCTS MAY BE TOXIC AND SHOULD NOT BE INHALED

PRODUCT TO CHARRING OR BURNING WILL PRODUCE FUMES THAT MAY CAUSE EYE, SKIN,

NOSE AND THROAT IRRITATION.

TOXICOLOGICAL INFORMATION/EXPOSURE LIMITS: NONE ESTABLISHED FOR POLYMER MIXTURES.

SUSPECTED CANCER AGENT: NO INGREDIENT OF THESE PRODUCTS THAT IS PRESENT AT CONCENTRATIONS EQUAL TO OR GREATER THAN 0.1 OF THE PRODUCT IS LISTED AS A SUSPECT CARCINOGEN.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: IF EYE IRRITATION OCCURS, FLUSH WITH WATER FOR AT LEAST 15 MINUTES.

SEEK MEDICAL ATTENTION.

SKIN: IF MOLTEN ADHESIVE/MASTIC CONTACTS SKIN, COOL IMMEDIATELY IN WATER. DO NOT ATTEMPT TO REMOVE MATERIAL FROM THE SKIN - TREAT AS A BURN AND SEEK MEDICAL ATTENTION.

INGESTION: NOT A NORMAL ROUTE OF EXPOSURE. IF SWALLOWED, SEEK MEDICAL ATTENTION.

INHALATION: REMOVE TO FRESH AIR. SEEK MEDICAL ATTENTION IF ANY BREATHING PROBLEM DEVELOPS.

7 PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

WASTE DISPOSAL METHOD: ALL PRODUCTS ARE CLASSIFIED AS NON-HAZARDOUS WASTE AND SHOULD BE BURIED OR INCINERATED AT APPROVED SITES. IF THERE ARE LOCAL REGULATIONS COVERING THE CONTROLLED INCINERATION OF HALOGENATED MATERIALS, THEN ALL FLAME-RETARDED PRODUCTS WILL BE SUBJECT TO SUCH REGULATIONS. REFER TO THE PRODUCT LITERATURE FOR IDENTIFICATION OF FLAME-RETARDED PRODUCTS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

HEAT RESISTANT GLOVES ARE REQUIRED IF HOT PRODUCTS ARE HANDLED AFTER INSTALLATION.

SPECIAL PRECAUTIONS: AVOID HEATING PRODUCTS BEYOND TEMPERATURES REQUIRED FOR NORMAL INSTALLATION. IF PRODUCTS CHAR OR BURN, IMMEDIATELY STOP HEATING. AVOID INHALING ANY FUMES WHICH EVOLVE UNDER SUCH CIRCUMSTANCES. ALLOW ANY FUMES TO DISPERSE AND VENTILATE BEFORE CONTINUING WORK IN THE AREA.

TRANSPORTATION: THESE PRODUCTS ARE NON-HAZARDOUS UNDER DEPARTMENT

BECAUSE THERE ARE NO APPLICABLE SHIPPING REGULATIONS FOR THESE PRODUCTS, LABELS ARE NOT REQUIRED ON THE OUTSIDE SHIPPING CONTAINER FOR THESE PRODUCTS AND ALL PRODUCTS MAY BE SHIPPED THROUGH THE U.S POSTAL SERVICES.

INSTALLATION: FOLLOW APPROPRIATE INSTALLATION INSTRUCTIONS AND APPLICATIONS GUIDES TO ENSURE THAT INSTALLATION IS PERFORMED PROPERLY. ENSURE THAT ANY LOCAL REQUIREMENTS/LEGISLATION CONCERNING THE USE OF HAND-HELD ELECTRICAL EQUIPMENT ARE OBSERVED. WHEN USING IR (INFRARED) HEATING DEVICES, OBSERVE SPECIFIC INSTRUCTIONS. DO NOT TOUCH HOT SURFACES IN INSTALLATION EQUIPMENT.

8 CONTROL MEASURES

RESPIRATORY PROTECTION (SPECIFY TYPE):

VENTILATION: IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE PRACTICE, ENSURE VENTILATION ADEQUATE TO CONTROL EXPOSURES BELOW STATE AND FEDERAL PERMISSIBLE LIMITS (PELS) DURING INSTALLATION.

PROTECTIVE CLOTHING AND EQUIPMENT: TO BE BASED ON THE OPERATION PERFORMED, IF THERE IS A DANGER OF MOLTEN ADHESIVE OR MASTIC CONTACTING THE SKIN OR EYES, USE EYE/FACE PROTECTION AND HEAT RESISTANT GLOVES. IF THERE IS NECESSARY TO HANDLE GROSSLY OVERHEATED OR FIRE-DAMAGED PRODUCTS, WEAR IMPERVIOUS GLOVES TO PREVENT POSSIBLE CONTACT WITH POTENTIALLY CORROSIVE INORGANIC ACID RESIDUES.

9 SPECIAL COMMENTS

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