MATERIAL SAFETY DATA SHEET

3M Center

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55144-1000

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DIVISION: ENGINEERED ADHESIVES

TRADE NAME:

Polygun (TM) TC Applicator & Jet-melt (TM) Adhesive Starter Pack Electronics Applications

ID NUMBER/U.P.C.:

62-9990-9936-9 00-21200-87189-4 62-9990-9937-7 00-21200-45224-6 62-9990-9938-5 00-21200-45223-9 62-9990-9939-3 00-21200-87193-1

ISSUED: May 16, 2001

SUPERSEDES: February 27, 1997

DOCUMENT: 05-5890-8

1. INGREDIENT	C.A.S. NO.	PERCENT		
Jet-melt Adhesive 3748-VO-TC Contains:	None		N/A	5 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 1
AMORPHOUS POLYPROPYLENE COPOLYMER	9010-79-1	30.0	- 40.0	
HYDROCARBON RESIN	69430-35-9	10.0	- 20.0	
BROMINATED FLAME RETARDANT	32588-76-4	10.0	- 20.0	
STYRENE-BUTADIENE POLYMER	9003-55-8	7.0	- 13.0	
POLYETHYLENE	9002-88-4	5.0	- 10.0	
ANTIMONY TRIOXIDE	1309-64-4	3.0	- 7.0	
PARAFFIN WAX	8002-74-2	3.0	- 7.0	
POLYOLEFIN BLEND	None	3.0	- 7.0	1 A.
Jet-melt Adhesive 3779-TC Contains:	None		N/A	
Polyamide Resin-New Jersey Trade Secret				
Registry No. 121307-5059P++	TradeSecret		100	

^{++ 3}M supplier trade secret.

This product contains the following toxic chemical or chemicals subject to 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: ANTIMONY TRIOXIDE

MSDS: Polygun (TM) TC Applicator & Jet-melt (TM) Adhesive Starter Pack Electronics Applications PAGE 2 May 16, 2001 2. PHYSICAL DATA EVAPORATION RATE:..... N/A SOLUBILITY IN WATER:..... nil SPECIFIC GRAVITY:..... 1.090 Water=1 PERCENT VOLATILE: 0.00 % by wt APPEARANCE AND ODOR: Waxy Solid, Jet-melt 3748-VO-TC pale yellow, Jet-melt 3779-TC dark amber, pungent resinous odor when molten. 3. FIRE AND EXPLOSION HAZARD DATA C.O.C. FLAMMABLE LIMITS - LEL:..... N/A FLAMMABLE LIMITS - UEL:..... N/A AUTOIGNITION TEMPERATURE: 626.00 F 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. UNUSUAL FIRE AND EXPLOSION HAZARDS: No unusual fire or explosion hazards are anticipated. NFPA HAZARD CODES: HEALTH: 0 FIRE: 1 REACTIVITY: 0 UNUSUAL REACTION HAZARD: none 4. REACTIVITY DATA STABILITY: Stable Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately MSDS: Polygun (TM) TC Applicator & Jet-melt (TM) Adhesive Starter Pack Electronics Applications

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4. REACTIVITY DATA (continued)

INCOMPATIBILITY - MATERIALS/CONDITIONS TO AVOID: Not applicable.

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon Monoxide and Carbon Dioxide, Toxic Vapors, Gases or Particulates.

5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:

Observe precautions from other sections. Collect spilled material.

RECOMMENDED DISPOSAL:

Dispose of waste product in a sanitary landfill.

ENVIRONMENTAL DATA:

No data available.

REGULATORY INFORMATION:

Volatile Organic Compounds: N/A. VOC Less H2O & Exempt Solvents: N/D.

Since regulations vary, consult applicable regulations or authorities before disposal. U.S. EPA Hazardous Waste Number = None (Not U.S. EPA Hazardous).

EPCRA HAZARD CLASS:

FIRE HAZARD: No PRESSURE: No REACTIVITY: No ACUTE: Yes CHRONIC: No

6. SUGGESTED FIRST AID

EYE CONTACT:

Immediately flush eyes with large amounts of water. Get immediate medical attention.

SKIN CONTACT:

Immediately flush affected area with large amounts of water and cover with a clean dressing. DO NOT ATTEMPT TO REMOVE ADHESIVE. Have burn treated by a physician.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

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6. SUGGESTED FIRST AID (continued)

INHALATION:

If signs/symptoms occur, remove person to fresh air. If signs/symptoms continue, call a physician.

IF SWALLOWED:

Do not induce vomiting. Drink two glasses of water. Call a physician.

7. PRECAUTIONARY INFORMATION

EYE PROTECTION:

Avoid eye contact with vapor, spray, or mist. Wear unvented goggles during operations in which exposure is likely.

SKIN PROTECTION:

Avoid skin contact with hot adhesive and applicator tip. Wear appropriate gloves, such as Nomex, when handling this material to prevent thermal burns.

RECOMMENDED VENTILATION:

Provide appropriate local exhaust for molten or extruded material. Use in a well-ventilated area.

RESPIRATORY PROTECTION:

Avoid prolonged breathing of vapors.

PREVENTION OF ACCIDENTAL INGESTION:

Do not ingest.

RECOMMENDED STORAGE:

Keep out of the reach of children.

FIRE AND EXPLOSION AVOIDANCE:

Not applicable.

EXPOSURE LIMITS

INGREDIENT	VALUE UNIT	TYPE	AUTH SKIN*
Jet-melt Adhesive 3748-VO-TC			
Contains:	NONE NONE	NONE	NONE
AMORPHOUS POLYPROPYLENE COPOLYMER	NONE NONE	NONE	NONE
HYDROCARBON RESIN	NONE NONE	NONE	NONE
BROMINATED FLAME RETARDANT	NONE NONE	NONE	NONE
STYRENE-BUTADIENE POLYMER	NONE NONE	NONE	NONE
POLYETHYLENE	NONE NONE	NONE	NONE
ANTIMONY TRIOXIDE	0.5 MG/M3	TWA	ACGIH

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

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요즘 시험을 통해 보였다.	EXPOSURE LIMITS	(continued)				
INGREDIENT		VALUE UNIT		TYPE	AUTH	SKIN*
		as	Sb			
PARAFFIN WAX		2	MG/M3	TWA	ACGIH	
	일하시면 학생님이 속을 먹다.	as	fume			
PARAFFIN WAX		2	MG/M3	TWA	OSHA	
		as	fume			
POLYOLEFIN BLEND		NONE	NONE	NONE	NONE	
Jet-melt Adhesive 3779-	-TC					
Contains:		NONE	NONE	NONE	NONE	
Polyamide Resin-New Jer	rsey Trade					
Secret Registry No.	121307-5059P++.	NONE	NONE	NONE	NONE	

* SKIN NOTATION: Listed substances indicated with 'Y' under SKIN refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- OSHA: Occupational Safety and Health Administration
- NONE: None Established

8. HEALTH HAZARD DATA

EYE CONTACT:

Vapors from heated material may cause eye irritation.

Single exposure may cause:

Mild Eye Irritation: signs/symptoms can include redness, swelling, pain, and tearing.

SKIN CONTACT:

Skin Burns (from contact with molten material): signs/symptoms may include burning pain, red and swollen skin, and blisters.

Mild Skin Irritation: signs/symptoms can include redness, swelling, and itching.

INHALATION:

Irritation (upper respiratory): signs/symptoms can include soreness of the nose and throat, coughing and sneezing.

Vapors of heated material may cause respiratory system irritation.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

MSDS: Polygun (TM) TC Applicator & Jet-melt (TM) Adhesive Starter Pack Electronics Applications PAGE 6 May 16, 2001 8. HEALTH HAZARD DATA (continued)

IF SWALLOWED:

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

Irritation of Gastrointestinal Tissues: signs/symptoms can include pain, vomiting, abdominal tenderness, nausea, blood in vomitus, and blood in feces.

CANCER:

WARNING: Contains a chemical which can cause cancer. (1309-64-4) (ACGIH suspected human carcingen A2, IARC possible human carcingen 2B, Calif. Proposition 65)

OTHER HEALTH HAZARD INFORMATION:

Exposure to this material in normal storage and handling has not been reported to cause significant adverse health effects. However, under normal processing conditions, e.g. grinding or heating, this product may release fumes and vapors of variable composition based on specific process conditions. These process releases may produce irritation or any of the health effects listed above when the emissions are present at elevated concentrations. Use with appropriate local exhaust ventilation.

SECTION CHANGE DATES

HEADING

SECTION CHANGED SINCE February 27, 1997 ISSUE

MSDS: Polygun (TM) TC Applicator & Jet-melt (TM) Adhesive Starter Pack

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