

MATERIAL SAFETY DATA SHEET



**MARTIN
ENGINEERING
COMPANY**

SECTION 1 - MATERIAL IDENTIFICATION

CHEMICAL FAMILY: Polyurethane Elastomer

SECTION 2 - INGREDIENTS

CAS Number and Chemical Name	%	OSHA		ACGIH	
		PEL/TLV-TWA		STEL-TWA	
		ppm	mg/m ³	ppm	mg/m ³

Polyurethane elastomers are fully reacted polymers forming particles which are not considered hazardous under OSHA's criteria in 29CFR1910.1200.

SECTION 3 - HEALTH HAZARDS

ROUTES OF EXPOSURE:

Inhalation of dust.

SIGNS AND SYMPTOMS OF EXPOSURE (Acute effects):

None known from solid article. Fumes from hot-wire cutting can be irritating and lead to coughing. These fumes could contain traces of isocyanates (MDI or TDI) depending upon which isocyanate is used in the elastomer formulation.

SIGNS AND SYMPTOMS OF EXPOSURE (Possible Longer Term effects):

Animal studies indicate that chronic inhalation or overexposure of dusts may cause inflammation of the lungs, fibrosis, and airway obstruction.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Dust from grinding operations may aggravate existing lung disorders when proper protection is not used.

SECTION 4 - FIRST AID

EYE CONTACT:

Flush eyes with water if dust from grinding causes irritation.

SECTION 5 - FIRE AND EXPLOSION DATA

CHARACTERISTICS:

Flash Point:	Not applicable
Upper Explosion Limit (UEL):	Not applicable
Lower Explosion Limit (LEL):	Not applicable

EXTINGUISHING MEDIA:

Water, dry chemical, foam or carbon dioxide.

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SPECIAL FIRE FIGHTING PROCEDURES:

Evacuate non-emergency personnel to a safe area. Firefighters should use self-contained breathing apparatus. Avoid breathing smoke, fumes, and decomposition products. Use water spray to drench smoldering elastomer. Product may melt, after ignition, to form flammable liquids. Burning produces intense heat, dense smoke, and toxic gases, such as carbon monoxide, oxides of nitrogen and traces of hydrogen cyanide.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

None.

SECTION 6 - REACTIVITY HAZARD DATA

CHEMICAL STABILITY:

Stable

CONDITIONS TO AVOID:

None

INCOMPATIBILITY (Materials to Avoid):

Strong acids or bases

HAZARDOUS DECOMPOSITION PRODUCTS:

Decomposition through burning produces fumes consisting of organic particulates, gaseous hydrocarbons, carbon dioxide, carbon monoxide, and may contain traces of toluene diisocyanate or diphenylmethane diisocyanate, nitrogen dioxide, hydrogen cyanide and acrolein.

HAZARDOUS POLYMERIZATION:

Will not occur.

CONDITIONS TO AVOID:

None.

SECTION 7 - SPILL, LEAK AND WASTE DISPOSAL INFORMATION

CLEAN-UP PROCEDURES:

Pick up and handle as any other inert solid material.

WASTE DISPOSAL:

Dispose of material according to any local, state and federal regulations.

SECTION 8 - PERSONAL PROTECTION/EXPOSURE CONTROLS

EYE PROTECTION:

None required in normal use. For grinding operations, use grinding goggles.

HAND PROTECTION:

None required.



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RESPIRATORY PROTECTION:

For grinding, wear a dust mask. If generating fumes from hot wire or hot knife operation, wear an air-purifying respirator with organic cartridge, if ventilation is inadequate.

PROTECTIVE CLOTHING:

None required.

ENGINEERING CONTROLS:

Local exhaust only required when generating dust during grinding or fumes during hot wire or hot knife operation.

WORK AND HYGIENIC PRACTICES:

None required.

SECTION 9 - STORAGE AND HANDLING

STORAGE:

Store elastomers in areas equipped with sprinkler systems. Store away from sparks, flames or other ignition sources.

OTHER PRECAUTIONS:

Cutting elastomer by hot wire can form decomposition products. Local exhaust ventilation should be used to remove any fumes. If isocyanates are emitted, ventilation should be sufficient to insure levels below the TLV for TDI (0.005 ppm TWA/0/02 PPM STEL) or MDI (0.02 ppm ceiling).

SECTION 10 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM: Solid

ODOR: None

PHYSICAL DATA:

Boiling Point:	Not applicable
Specific Gravity (H ₂ O) = 1):	1.05 - 1.26
Vapor Pressure (mm Hg):	Not applicable
Melting Point:	Will not melt. Will degrade above 250°C (480°F).
Vapor Density (AIR = 1):	Not applicable
Evaporation Rate (Butyl Acetate = 1):	Not applicable
Solubility in Water:	Insoluble