SAFETY DATA SHEET: ZIRCONIUM OXIDE FILLED PADS

SECTION 1: IDENTIFICATION

SYNONYM: Elastomeric Polyurethane
RECOMMENDED USE: Polyurethane polishing pad
RESTRICTIONS ON USE: Industrial application
SUPPLIER: JH Rhodes Co., Inc.
a subsidiary of Universal Photonics, Inc.
10 Ward Street
Vernon, NY 13476 USA

FOR INFORMATION CALL
CUSTOMER SERVICE: +1 (315) 829-3600
EMERGENCY TELEPHONE NUMBER: 1-866-519-4752 3-E COMPANY - ACCT # 3665

SECTION 2: HAZARD IDENTIFICATION

GHS CLASSIFICATION: Elastomer
GHS LABEL ELEMENTS: None
OTHER HAZARDS: This product is considered non-hazardous as sold. Use of this product during machining, hot wire cutting, or branding may result in the inhalation of vapors or breathing of dust.

SECTION 3: COMPOSITION INFORMATION

<table>
<thead>
<tr>
<th>CAS #</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyurethane Elastomer</td>
<td>N/A*</td>
<td>N/A*</td>
</tr>
<tr>
<td>Zirconium Oxide</td>
<td>1314-23-4</td>
<td>5 mg/m³</td>
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</tbody>
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* Polyurethane Elastomers are fully reacted polymers forming articles which are not considered hazardous under OSHA’s criteria in 29 CFR 1910.1200

SECTION 4: FIRST AID MEASURES

PRIMARY ROUTE(S) OF ENTRY: Inhalation - Breathing of dust during machining and inhalation of vapors during hot wire cutting or branding.

EYES: Flush eyes for at least 15 minutes with water if dust from grinding causes irritation.

SKIN: Wash skin with soap and water. Consult physician if irritation persists.

INHALATION: Remove affected person to fresh air. Consult physician if irritation persists.

SECTION 5: FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Water spray, dry chemical.

UNUSUAL HAZARDS: 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.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS: Evacuate non-emergency personnel to a safe area. Fire fighters should use self-containing breathing apparatus. Avoid breathing smoke, fumes, and decomposition products. Use water spray to drench smoldering elastomer.
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SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: None required
ENVIRONMENTAL PRECAUTIONS: None required
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Pick up and handle as any other inert solid material

SECTION 7: HANDLING & STORAGE

HANDLING: Wear proper personal protective equipment.
STORAGE: Store elastomers in areas equipped with sprinkler systems. Store away from sparks, flames, or other ignition sources.
OTHER PRECAUTIONS: Use local exhaust ventilation to remove fumes associated with hot wire cutting and grinding.

SECTION 8: PERSONAL PROTECTION AND EXPOSURE CONTROLS

RESPIRATORY PROTECTION: For grinding and hot wire cutting wear an air purifying respirator, UNISORB c30 p100 or equivalent filter cartridge that will filter dust particles down to 0.3 microns.
EYE PROTECTION: Use safety goggles where potential for exposure to dust or other particles.
VENTILATION: Use local exhaust ventilation for grinding and hot wire cutting.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Porous rigid polyurethane foam of various colors.
ODOR: Odorless
ODOR THRESHOLD: N/A
PH: N/A
MELTING POINT/FREEZING POINT: 380° TO 450° F (WILL DEGRADE ABOVE 300° F)
INITIAL BOILING POINT AND BOILING RANGE: N/A
FLASH POINT: N/A
EVAPORATION RATE: N/A
FLAMMABILITY (SOLID, GAS): N/A
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: N/A
FLAMMABLE LIMITS: N/A
VAPOR PRESSURE @ 20°C: N/D
VAPOR DENSITY(AIR=1): N/D
RELATIVE DENSITY: N/A
SOLUBILITY: INSOLUBLE IN WATER
PARTITION COEFFICIENT: N-OCTANOL/WATER: N/A
AUTOIGNITION TEMP: N/A
DECOMPOSITION TEMPERATURE: N/A
VISCOSITY: N/A

SECTION 10: STABILITY & REACTIVITY

CHEMICAL STABILITY: Stable at ambient temperatures and pressures.
INCOMPATIBLE MATERIALS: Strong Acids or Bases, chlorinated solvents, amines, and alcohols.
HAZARDOUS DECOMPOSITION: Decomposition through burning produces fumes consisting of organic particulates, gaseous hydrocarbons, carbon dioxide, carbon monoxide, and may contain traces of isocyanates (TDI or MDI), hydrogen cyanide, acrolein, and oxides of nitrogen.
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SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE: None known from solid Article. Fumes from hot wire cutting can be irritating and may lead to coughing. These fumes could contain residual TDI.

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

CARCINOGENICITY: None, cured polyurethane is not listed as a carcinogen.

SECTION 12: ECOLOGICAL INFORMATION

Significant ecological problems not expected.

SECTION 13: DISPOSAL INFORMATION

WASTE DISPOSAL METHOD: Dry Pads can be disposed of via standard landfill methods consistent with applicable Federal, State, and local law.

SECTION 14: TRANSPORTATION INFORMATION

UN NUMBER: None allocated
PROPER SHIPPING NAME: None allocated
TRANSPORT HAZARD CLASS(ES): N/A
PACKING GROUP: None allocated
ENVIRONMENTAL HAZARDS: None
TRANSPORT IN BULK: None
SPECIAL TRANSPORT PRECAUTIONS: None

DOT (U.S.): Not Regulated
TDG (Canada): Not Regulated
IMDG: Not Regulated
IATA: Not Regulated

SECTION 15: REGULATORY INFORMATION

FULLY CURED POLYURETHANE IS NOT LISTED.

SECTION 16: OTHER INFORMATION

N/A = Not Applicable    N/D = Not Determined

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REV#: 2
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