



MATERIAL SAFETY DATA SHEET
COMPOSITE ORTHODONTIC BRACKETS

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1-IDENTIFICATION

Composite products (Thermoplastic Polyurethanes TPUs) – Brackets, Lingual Attachments

2-HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

Thermoplastic Polyurethanes (TPU) Medical Grade are made essentially from three reactants: isocyanate, long-chain macrodiol, short chain diol extender.

Ingredients that are considered hazardous are:
Diphenylmethane Diisocyanate (MDI)
Polyether Polyol based on Dipropynglycol

This listing is a summary of elements used in the raw material components. Trace elements may be present in minute amounts.

3-PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 144°C
Vapor Pressure (mm Hg): ND
Vapor Density (Air = 1): ND
Solubility in Water: Insoluble
Appearance and Odor: Solid, odorless ceramic
Specific Gravity (H₂O=1): 1.22 g/cm³
Melting Point: Degree C: ND
Evaporation Rate (Butyl Acetate=1): ND

4-FIRE AND EXPLOSION HAZARD DATA

Flash Point: 240° C
Extinguishing Media: Foam, Dry Chemical, or NFPA Class B Extinguisher.
Special Fire Fighting Procedures: Wear self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: None.

5-REACTIVITY DATA

Stability: Stable.
Conditions to Avoid: None
Incompatibilities (Materials to Avoid): None
Hazardous Decomposition or Byproducts: None
Hazardous Polymerization: Will not occur
Conditions to Avoid: None

6-HEALTH HAZARD DATA

Medical grade Polyurethane products are not generally considered hazardous in the form they are shipped.

Health Effects:

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: N/A
Ingestion: While ingestion quantities large enough to cause health effects is unlikely, consult a physician if it occurs
Skin Contact: No documented irritations
Eye Contact: Flush thoroughly with water. Consult a physician

7-PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled: Not necessary as product is a solid plastic.
Waste Disposal Method: Dispose of in accordance with EPA or local regulations.
Precautions to be Taken in Handling and Storing: N/A.
Other Precautions: Follow standard laboratory safety practices.

8-CONTROL MEASURES

Ventilation: General
Protective Gloves: Required when cutting or grinding
Eye Protection: Required when cutting or grinding
Other Protective Clothing or Equipment: Required when cutting or grinding
Work/Hygienic Practices: Follow standard laboratory practices.

9-NOTE

The information contained in the MSDS is believed to be valid and accurate. However, MO makes no warranty, either expressed or implied, as to the completeness of information in all possible conditions.

REASONABLE SAFETY PRECAUTIONS MUST ALWAYS BE OBSERVED!