SECTION 1: Identification of the substance or mixture and of the company

1.1. Product identifier

Product description: Thermoforming discs and plates.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified Use: Professional use: Products for thermoforming technique for invisible orthodontic aligners and for aesthetic orthodontic post-therapy retainers.

1.3. Details of the supplier of the safety data sheet

Cottonwood Orthodontic Lab
e-mail: Brandon@cottonwoodlabs.com cottonwoodlabs.com
Tel. 801-904-2006 6526 S State Street Suite 301, Murray, Utah 84107

1.4. Emergency telephone number

801-440-2639

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

This material is classified as not hazardous under OSHA regulations. Under normal conditions of use, this product is not expected to create any unusual industrial hazards. Irritating gases / fumes may be given off during burning or thermal decomposition. Contact with hot material will cause thermal burns.

2.2. Label elements

Not applicable.

2.3. Other hazards

Not classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.1. Substances

This product is a mixture.

3.2. Mixtures

Mixture based on Polyethylene terephthalate glycol (PETG) copolyester

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation: If inhaled: keep patient calm, remove to fresh air, and summon medical help.
Skin contact: Areas affected by molten material should be quickly placed under cold running water.

4.2. Most important symptoms and effects, both acute and delayed

Not available.

4.3. Indication of any immediate medical attention and special treatment needed

Note to a doctor: In case of inhalation of decomposition products: treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing Media: Water, dry extinguishing media, foam, carbon dioxide.
Unsuitable extinguishing Media: None.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition, burning or faulty handling may diffuse noxious gases and vapors.

5.3. Advice for firefighters

In case of fire, wear a self contained breathing apparatus. Dispose of fire residues and contaminated extinguishing water in accordance to local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Not necessary.

6.2. Environmental precautions

See section 12.

6.3. Methods and material for containment and cleaning up

Collect by mechanical tools.

6.4. Reference to other sections

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SECTION 7: Handling and storage

7.1. Precautions for safe handling
Ensure good ventilation and local exhaustion of the working area.
In case of mechanical operations (drill, saw, mill) the instructions/limited values for handling fine du.

7.2. Conditions for safe storage, including any incompatibilities
Store in original packing, keep away from sunlight and in a dry place.

7.3 Specific end use(s)
No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No information available.

8.2. Exposure controls
In case of usual handling, no special protective equipment will be necessary.
Under consideration of applied work technique it may be mandatory to use.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection	Safety glasses or complete face protection.
Hand protection	Safety gloves, in case rough edges may cause cuts.
Respiratory protection	Dust filter type P1 in case of fine dust creation.
General safety and hygiene measures	None.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Disc and plates, solid.
Colour	Translucent or colored.
Odour	Odourless.
Water solubility	Insoluble.
Solubility other	Inorganic solvents.
Melting point	>70°C ISO 306.
Flash point	>400°C ASTM E-659/DIN 51794.
Flammability	None.
Density	1.27 g/cm^3 ISO1183.
Bulk density	Not applicable.

9.2. Other information
No further details as regards the safety-relevant parameters are required.

SECTION 10: Stability and reactivity

10.1. Reactivity
Information not available.

10.2. Chemical stability
Stable under normal condition.

10.3. Possibility of hazardous reactions
Thermal decomposition, burning or faulty handling may diffuse noxious gases and vapours.

10.4. Conditions to avoid
Avoid thermal decomposition, do not overheat.

10.5. Incompatible materials
Product reacts with oxidising agents.

10.6. Hazardous decomposition product(s)
Thermal decomposition starts at 270°C.
Thermal decompositions release monomers, carbon dioxide, carbon monoxide, steam.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity: no data existing, except those mentioned below. Water-insoluble.
Test on material:

LD50, oral: (male rat)	>3.200 mg/kg (highest dose rate tested).
LD50, oral: (male mouse)	>3.200 mg/kg (highest dose rate tested).
LD50, dermal: (Guinea pig)	>1.000 mg/kg.
Skin irritation (Guinea pig)	Slight.
Irritation of eyes (rabbit, unwashed eyes)	Slight.
Irritation of eyes (rabbit, washed eyes)	Slight.
Irritation of eyes (Guinea pig)	None.

Additional information:
In our experience and according to information available to us the product is not harmful to health provided it is correctly handled and processed according to the given recommendations.

SECTION 12: Ecological information

Due to the consistency of the product, and its insolubility in water, it will apparently not be bio-available.

12.1. Toxicity

Not available.

12.2. Persistence and degradability

Not available.

12.3. Bioaccumulative potential

Not available.

12.4. Mobility in soil

Not available.

12.5. Results of PBT and vPvB assessment

Not available.

12.6. Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

Dispose in accordance with all applicable regulations. Disposal Dispose of contents/container in accordance with local/ regional/national/international regulations

Methods and Materials for Containment and Cleaning Up Minimize dust generation and accumulation. Clean up residue with a high-efficiency particulate filter vacuum. Collect spilled material in appropriate container for disposal.

13.1. Waste treatment methods

The product is qualified for material recycling. After suitable treatment the material can again be melted and processed.

SECTION 14: Transport information

Land Transport (DOT): Non - regulated Sea Transport (IMDG): Non – regulated Air Transport (ICAO/IATA): Non – regulated

SECTION 15: Regulatory information

United States Federal Regulations OSHA Hazcom Standard Rating: Non-Hazardous US. Toxic Substances Control Act: Listed on the TSCA Inventory US. EPA Cercla Hazardous Substances (40 CFT 302): Components – None SARA Section 311/312 Hazard Categories: Non-Hazardous under Section 311/312 US. EPA Emergency Planning and Community Right-to-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substances (40 CFR 355, Appendix A): Components – None US. EPA Emergency Planning and Community Right-to-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) – Supplier Notification Required: Components – None US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261): Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous. SECTION 16. OTHER INFORMATION (non-mandatory)

15.2. Chemical safety assessment

Not applicable.

SECTION 16: Other information

The present information does not imply any liberty to break patent rights.
. HMIS Rating: Health – 1 Flammability – 1 Physical Hazard – 0 0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4 = Severe * = Chronic Health Hazard

The product is intended for orthodontic and use only. The use of the product has to be restricted to skilled and licensed professionals. The information relates only to specific product designated and is not intended as a warranty of quality.

ASTM E-659: American Society for Testing and Materials, Standard Test Method for Autoignition Temperature of Chemicals.
CAS No.: Chemical Abstract Service Registry number.
DIN 51794: German Institute for Standardization, Testing of mineral oil hydrocarbons; determination of ignition temperature.
EC No.: European Inventory of Existing Commercial Chemical Substances.
IBC Code: International Bulk Chemicals Code.
ISO306: International Organization for Standardization, Plastics - Thermoplastic materials - Determination of Vicat softening temperature.
ISO1183: International Organization for Standardization, Plastics - Methods for determining the density of non-cellular plastics.
LD50 Lethal Dose 50: the dose required to kill half the members of a tested population after a specified test duration.
MAK (Maximale Arbeitsplatz-Konzentration): Maximum Workplace Concentration.
PBT: Persistent, Bioaccumulative And Toxic Substances.
VDI Verein Deutscher Ingenieure.
vPvB: Very Persistent And Very Bioaccumulative Substances.