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## TECHNICAL GUIDE

### *Material Data Safety Sheet - PETG*

#### 1. Chemical Product and Company Identification

Product Name	Berman Resin - Translucent Panels
Product Identification	PETG Sheet
Manufacturer/Supplier	Joel Berman Glass Studios
MSDS Prepared by	Joel Berman Engineering
Chemical Name	Polyethylene Terephthalate Glycol
Synonyms(s)	PETG
Molecular Formula	not applicable
Molecular weight	not applicable
Product Use	plastic
ASHA Status	nonhazardous

#### 2. Composition Information on Ingredients

*Typical composition is given, and it may vary. A certificate of analysis can be provided.*

<b>Weight%</b>	<b>Component</b>	<b>CAS Registry NO.</b>
100%	copolyester	25640-14-6

*One or more of the following co-components may be present in trace amounts: Polyester, Rayon, Aluminum, Raime. Cotton, Linen, Natural straw or foliage, Paper.*

#### 3. Hazards Identification

Skin contact:	Caution! Molten material will produce thermal burns
Eye Contact:	"Inert" or "Nuisance" dust may cause abrasion irritation to the eye.
Inhalation:	Caution! Inhalation of MMA vapors from heated product can cause nausea headache, dizziness, as well as irritation of the lungs, nose and throat.
Chronic (Cancer)	No evidence of adverse effects; adverse effects unlikely
Teratology (Birth defects)	No information, but adverse effects unlikely
HMIS® Hazard Ratings	Health- 1, Flammability- 1, Chemical Reactivity- 0

*In the United States of America, refer to NFPA® Pamphlet No. 654, "Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries."*

*HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.*

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#### **4. First-Aid Measures**

Inhalation:	If symptomatic, move to fresh air. Get medical attention if symptoms persist.
Eyes:	If molten material or dust contacts the eye, immediately flush with water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.
Skin:	If burned by contact with molten material, cool as quickly as possible. Do not peel material from skin. Get medical attention. For contact with the material in solid state form, wash skin with soap and water.
Ingestion:	Material is not expected to be absorbed from the gastrointestinal tract so that induction of vomiting should not be necessary.
Note to Physicians:	Burns should be treated as thermal burns. The material will come off as healing occurs: therefore, immediate removal from the skin is not necessary.

#### **5. Physical And Chemical Properties**

Physical Form:	Solid (panel)
Appearance:	Clear to opaque
Odor:	Slight
Specific Gravity:	>1
Softening Point:	>100° C / >212° F
Solubility in water	Insoluble
Flash Point:	Not applicable, combustible solid
Auto-ignition Temperature	454° C / 850° F )ASTM E659)

#### **6. Stability And Reactivity**

Stability:	Not fully evaluated. Materials containing similar structural groups are normally stable.
Incompatibility:	Material reacts with strong oxidizing agents
Hazardous Polymerization:	Will not occur.
Thermal Decomposition:	Thermal stability not tested. Low stability hazard expected at normal operating temperatures.

#### **7. Fire Fighting Measures**

Extinguishing Media:	Water spray dry chemical foam or carbon dioxide
Fire Fighting Procedures:	Wear self contained air purifying respirator (pressure-demand, MSHA/NIOSH approved or equivalent) and full protective gear.
Hazardous Combustion:	Carbon dioxide, carbon monoxide
Products:	
Unusual Fire and Explosion Hazards:	Heated material can cause flammable vapors with air.

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**8. Waste Disposal/Accidental Release Measures**

Disposal: Product can be disposed by incineration at a facility that complies with local, state and federal regulations  
Accidental Release: In case of spill, sweep, scoop or pick up and remove to a suitable container.

**9. Handling And Storage**

Maximum Storage Temperature: 160° C / 320° F. Extensive storage at higher temperatures will emit MMA vapors, carbon dioxide or carbon monoxide.  
Storage measures: Store at ambient temperature when possible.  
Keep from contact with oxidizing materials.  
Minimize dust generation and accumulation.  
At temperatures >60°C / >140°F Store panels at a 15° angle to the vertical plane to minimize cold-forming effects..  
Handling Measures: Avoid temperatures <300° C / <570° F  
Sawing, cutting or routing of Acrylic product generates "inert" or "nuisance" dust. Blower collection systems or exhaust ventilation systems should be installed to prevent airborne contaminant dispersion due to cutting, sawing or thermal forming operations.

**10. Exposure Controls/Personal Protection**

*Country specific exposure limits have not been established or are not applicable unless listed below*

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances such as poorly ventilated spaces, mechanical generation of dusts, heating, drying, etc.  
Respiratory Protection: None required under normal circumstances. However, if engineering controls do not maintain airborne concentrations to an acceptable level, an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: dust, organic vapor.  
Eye Protection: Wear a face shield or safety glasses with side shields when working with molten material, or when sawing, cutting or routing the material.  
Skin Protection: Wear cotton or canvas gloves to protect against thermal burns, cuts and abrasions to hands.  
Recommended Destination Facilities: Eye bath, washing facilities

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## 11. Toxicological Information

*Toxicity data are not available unless listed below*

Oral LD-50: (male Rat)	> 3,200 mg/kg (highest dose tested)
Oral LD-50: (male mouse)	> 3,200 mg/kg (highest dose tested)
Dermal LD-50: (guinea pig)	> 1,000 mg/kg
Skin Irritation: (guinea pig)	slight irritation
Eye irritation:	
(rabbit, unwashed eyes)	slight
Eye Irritation:	
(rabbit, washed eyes)	slight

Acute Aquatic Effects Data:

96 h LC-50 (fathead minnow)	> 100 mg/l (highest concentration used)
96 h LC-50 (daphnid)	> 100 mg/l (highest concentration used)
96 h LC-50 (ramshorn snail)	> 100 mg/l (highest concentration used)
96 h LC -50 (flatworm)	> 100 mg/l (highest concentration used)

## 12. Regulatory Information

**WHMIS (Canada)** Status: non controlled  
**SARA 313: none, unless listed below**

Carcinogenicity Classification (components present at 0.1% or more): none, unless listed below

**TSCA (US Toxic Substances Control Act):** This product is listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

**DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act)**  
This product is listed on the DSL. Any impurities present in this product are exempt from listing.

**EINECS (European Inventory of Existing Commercial Chemical Substances):** All components of this product are listed on EINECS. Any polymer intentionally present in this product has regulatory clearance under Directives of the European Union.

**AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification And Assessment Scheme):** This product is listed on AICS or otherwise complies with NICNAS.

**MITI (Japanese Handbook of Existing and New Chemical Substances):** This product is listed in the Handbook or has been approved in Japan by new substance notification.

**ECL (Korean Toxic Substances Control Act):** This product is listed on the Korean inventory or otherwise complies with the Korean Toxic Substances Control Act.

### **13. Other Information**

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