

1. PRODUCT AND COMPANY INFORMATION

Product Name : Exception Brackets
Common Name : Composite Brackets / Polycarbonate

2. HAZARDS IDENTIFICATION

Types of Dangerous/Toxic Categories

Category: N/A
Dangerous Material: N/A
Toxic Material: N/A

3. COMPOSITION/INFORMATION ON INGREDIENTS

Single or Compound: Compound
Chemical Name: Polycarbonate
Chemical or Structural Formula:

This product contains no hazardous ingredients.

Ingredients	CAS #	Weight %
Titanium dioxide	13463-67-7	0.1-1
Barium sulfate	7727-43-7	5-10

4. FIRST AID MEASURES

Eye Contact: Resin particles, like other inert materials, can be mechanically irritating. Rinse immediately with plenty of water, also under eyelids, for at least 15 minutes. If eye irritation persists, seek medical attention.

Inhalation: Resin particles, like other inert materials, can be mechanically irritating. Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. When symptoms persist or in all cases of doubt seek medical advice.

Skin Contact: Experience shows no unusual dermatitis hazard from routine handling. Wash off with soap and plenty of water. If irritation persists, seek medical attention.

Ingestion: May be harmful if swallowed. Do not induce vomiting without medical advice. When symptoms persist or in all cases of doubt seek medical advice.

5. FIRE FIGHTING MEASURES

Flash point: Not applicable.

Auto Ignition Temp: N/A

Extinguishing media: Carbon dioxide blanket, water spray, dry powder, foam.

Special firefighting procedures: Full-face self-contained breathing apparatus (SCBA) used in positive pressure mode should be work to prevent inhalation of airborne contaminants.

Unusual fire & explosion hazards: Carbon dioxide, carbon monoxide, oxides of nitrogen, other hazardous materials and smoke are all possible.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Wear approved personal protection during cleanup, such as impervious gloves, boots and coveralls.

Environmental precautions: Should not be released into the environment. The product should not be allowed to enter drains, water courses or the soil.

Methods for cleaning up: Clean up promptly by sweeping or vacuum. Package all material in plastic, cardboard or metal containers for disposal. Refer to section 13 of the SDS for proper disposal methods.

7. 7HANDLING AND STORAGE

Usage Precautions: Take measures to avoid buildup of electrostatic charge. Heat only in areas with appropriate exhaust ventilation.

Storage Precautions: Keep in containers dry and tightly closed to avoid moisture absorption and contamination. Keep in a dry, cool place.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

For fumes or dust generated from melting or abrasive cutting:

Cleaning Wastes: Read and understand the cleaning product safety data sheet.

Eye/Face Protection: Safety glasses with side-shields.

Respiratory Protection: No personal respirator protective equipment normally required.

Protective Clothing: Wear suitable protective clothing and equipment, such as hand and eye protection.

Exposure Limit(s):

Components	Value	Exposure Time	Exposure Type	List
Barium Sulfate	10 mg/m3	Time Weighted Average (TWA):		ACGIH
	5 mg/m3	Recommended Exposure Limit (REL):	Respirable	NIOSH
	10 mg/m3	REL:	Total	NIOSH
	5 mg/m3	PEL:	Respirable fraction.	OSHA Z1
	15 mg/m3	PEL:	Total dust.	OSHA Z1
	5 mg/m3	TWA:	Respirable fraction.	OSHA Z1A
	10 mg/m3	TWA:	Total dust.	OSHA Z1A
Titanium Dioxide	10 mg/m3	TWA:		ACGIH
	15 mg/m3	PEL:	Total dust.	OSHA Z1
	10 mg/m3	TWA:	Total dust.	OSHA Z1A
	10 mg/m3	TWA:	As Ti	MX OEL
	20 mg/m3	Short Term Exposure Limit (STEL):	As Ti	MX OEL

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Color:	Various white geometrical shapes
Odor:	Very faint
Odor Threshold:	N/A
Physical State:	Solid
pH:	N/A
Melting Point:	Not determined
Boiling Point (760mm Hg):	N/A
Flash Point:	N/A
Evaporation Rate:	N/A
Flammability:	N/A
Explosive Limits:	N/A
Vapor Pressure:	N/A
Vapor Density:	N/A
Specific Gravity:	Not determined
Solubility (water):	Insoluble
Partition Coefficient:	N/A
Auto-ignition Temperature:	N/A
Decomposition temperature:	N/A
Thermal Expansion (ambient to 100°C):	N/A
Thermal Conductivity (ambient temperature):	N/A

10. STABILITY AND REACTIVITY

Chemical Stability: Stable and non-reactive under normal ambient atmospheric conditions.

Conditions to avoid: Keep away from oxidizing agents and open flame. To avoid thermal decomposition, do not overheat.

Incompatible materials: Strong acids and oxidizing agents.

Hazardous decomposition products: Carbon dioxide, carbon monoxide, oxides of nitrogen, other hazardous materials and smoke are all possible.

11. TOXICOLOGICAL INFORMATION

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

Toxicity:

CAS No.	Chemical Name	Effect	Target Organ
13463-67-7	Titanium Dioxide	Systemic effects	Respiratory system
7727-43-7	Barium Sulfate	Irritant	Respiratory system
		Systemic effects	Eyes, respiratory system.

Carcinogenicity:

CAS No.	Chemical Name	OSHA	IARC	NTP
13463-67-7	Titanium Dioxide	No	2B	No

IARC Carcinogen Classification: 2B – The component is possibly carcinogenic to humans.

12. ECOLOGICAL INFORMATION

Persistence and degradability: Not readily biodegradable

Environmental toxicity: Chemicals are not readily available as they are bound within the polymer matrix.

Bioaccumulation potential: Chemicals are not readily available as they are bound within the polymer matrix.

Additional advice: No data available.

13. DISPOSAL CONSIDERATIONS

Recyclable material should be recycled through authorized parties and in accordance with all local, state and federal regulations. If discarded, waste codes may apply depending upon use of the product.

14. TRANSPORTATION INFORMATION

U.S. DOT Classification: Not regulated for transportation.

ICAO/IATA: Refer to specific regulation.

IMO/IMDG (maritime): Refer to specific regulation.

15. REGULATORY INFORMATION

U.S. Regulations:

OSHA Status: Classified as hazardous based on components.

TSCA Status: All components of this product are listed on or exempt from the TSCA Inventory.

U.S. EPA CERCLA Hazardous Substances (40 CFR 302): N/A

California Proposition 65: N/A

SARA Title III Section 302 Extremely Hazardous Substance: Unless specific chemicals are identified under this section, this product is Not Applicable under this regulation.

SARA Title III Section 313 Toxic Chemicals: Unless specific chemicals are identified under this section, this product is Not Applicable under this regulation.

Canadian Regulations:

National Pollutant Release Inventory (NPRI): N/A

WHMIS Classification: D2A

DSL: All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt.

National Inventories:

Australia AICS: Listed

China IECS: Listed

Europe EINECS: Listed

Japan ENCS: Not determined

Korea KECI: Listed

Philippines PICCS: Listed

16. ADDITIONAL INFORMATION

None

Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself. The information in the SDS was obtained from sources that we believe are reliable and is believed to be valid and accurate. American Orthodontics, however, makes no warranty, express or implied, regarding its correctness of the information provided. The conditions or method of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. If the product is used as a component in another product or used in a way other than recommended by the Company, this SDS information may not be applicable. **Reasonable safety precautions must always be observed.**

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