



Safety Data Sheet (SDS)

Release Date: 15Sep2026

Prepared in accordance with OSHA HazCom and GHS; compatible with EU REACH Annex II, as amended by (EU) 2020/878, WHMIS, and AU WHS requirements.

RODIN Ortho IBT Resin

Section 1. Product and Company Identification

Product Identifier: Photopolymer Resin

Trade Name: RODIN Ortho IBT

Recommended Use: 3D printed custom orthodontic bracket placement guides.

Restrictions on Use: For professional dental/laboratory use only. Not for direct intraoral placement in uncured state.

Manufacturer/Supplier: Pac-Dent, Inc.

670 Endeavor Circle

Brea, CA 92821

Phone: +1-909-839-0888

Email: info@pac-dent.com

Emergency telephone number:

CHEMTREC (US): +1-800-424-9300

International: +1-703-527-3887

Section 2. Hazard(s) Identification

GHS Hazard Classification of the Substance or Mixture:

Skin Sensitization – Category 1

Eye Irritation – Category 2

Acute Toxicity (Oral) – Category 5 (uncured material only)

Specific Target Organ Toxicity – Single Exposure (STOT SE) – Category 3 (respiratory irritation, uncured material only)

Hazardous to the Aquatic Environment – Chronic Category 3 (uncured material only)



GHS08



GHS07



GHS09

Signal Word: Warning

Hazard Statements

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H303 – May be harmful if swallowed (uncured material only)

H335 May cause respiratory irritation (uncured material only).

H412 Harmful to aquatic life with long lasting effects (uncured material only).

Precautionary Statements - Prevention

P261 Avoid breathing dust/fume/gas/mist/vapours/spray (uncured material only).

P264 Wash hands and exposed skin thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves, protective clothing, eye protection and face protection.

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Disposal

P501 Dispose of contents/container in accordance with local, regional, national, and international regulations.

Other Hazards

Uncured resin may cause irritation to skin, eyes, and respiratory tract. Avoid direct contact with uncured material. Exposure to light, particularly UV light or direct sunlight, or excessive heat may initiate exothermic polymerization.

Section 3. Composition/Information on Ingredients

Chemical Name, Common Name and Synonyms:	CAS # and other unique identifiers	% by Weight
Methacrylic Esters*	Proprietary*	25% – 55%
Photoinitiators*	Proprietary*	<3%
*Denotes that the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.		



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Section 4. First-Aid Measures

General Advice

If medical advice is needed, have product container, label, or Safety Data Sheet available. Ensure medical personnel are aware of the material involved and take precautions to protect themselves.

After Inhalation

Remove person to fresh air and keep comfortable for breathing. If irritation, coughing, or other symptoms develop or persist, seek medical attention.

After Skin Contact

Immediately wash affected skin thoroughly with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. If irritation, redness, or allergic skin reaction develops, seek medical advice/attention.

After Eye Contact

Immediately rinse cautiously with clean running water for at least 15 minutes, holding eyelids open. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention if irritation persists.

After Swallowing

Rinse mouth thoroughly with water. Do not induce vomiting unless directed by medical personnel. Seek medical attention if discomfort occurs or if a significant quantity has been swallowed.

Most Important Symptoms and Effects, Both Acute and Delayed

Inhalation: May cause respiratory irritation, coughing, or discomfort from vapors or mist.

Skin Contact: May cause irritation, redness, or allergic skin sensitization after repeated exposure.

Eye Contact: Causes irritation, redness, tearing, and discomfort.

Ingestion: May cause gastrointestinal discomfort, nausea, or irritation.

Immediate Medical Attention / Special Treatment

Treat symptomatically. No specific antidote is known.

Section 5. Fire-Fighting Measures

Suitable Extinguishing Media

Use alcohol-resistant foam, carbon dioxide (CO₂), dry chemical powder, or water spray/fog for cooling exposed containers.

Unsuitable Extinguishing Media

Do not use a direct water jet, as it may spread burning material.

Special Hazards

Combustible organic components may burn under fire conditions. Heat may cause thermal decomposition, irritating or hazardous fumes, pressure build-up, and possible polymerization with release of heat. Combustion/decomposition products may include carbon monoxide, carbon dioxide, nitrogen oxides, and acrid organic fumes.

Advice for Firefighters

Wear self-contained breathing apparatus (SCBA) and full protective firefighting gear.

Cool fire-exposed containers with water spray.

Prevent contaminated firefighting runoff from entering drains, waterways, or soil.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Avoid contact with skin and eyes. Wear appropriate personal protective equipment, including safety glasses with side shields, protective gloves, and laboratory coat, as described in Section 8. Ensure adequate ventilation.

Environmental precautions: Avoid releases to the environment. Prevent further leakage or spillage if safe to do so. Notify relevant authorities if required by local or national regulations.

Methods and material for containment and cleaning up: Exposure to sunlight or artificial light will cause the resin to polymerize. Allow the spilled material to cure, then collect the hardened material mechanically and place it into a suitable container for disposal.

Reference to other sections: Refer to Section 8 for information on personal protective equipment and Section 13 for disposal considerations.

Section 7. Handling and Storage

Precautions for Safe Handling

Use only in accordance with professional instructions and validated processing procedures. Avoid contact with skin, eyes, and clothing. Avoid breathing vapors, mist, or aerosols. Use with adequate ventilation. Wash hands thoroughly after handling. Keep containers tightly closed when not in use. Protect from unintended exposure to sunlight, UV light, or other curing light sources.

Conditions for Safe Storage

Store in the original tightly closed container in a cool, dry, well-ventilated place. Recommended storage temperature: 4°C to 25°C (40°F to 75°F). Protect from direct sunlight, UV/curing light, excessive heat, moisture, and sources of ignition. Do not freeze. Keep away from strong oxidizing agents, strong reducing agents, peroxides, amines, and polymerization initiators.

Specific End Use(s)

3D printing resin intended for fabrication of removable die models and solid models for professional, laboratory, prototyping, and general modeling applications. Extraoral use only.



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Section 8. Exposure Controls / Personal Protection

Control Parameters

No specific occupational exposure limits have been established for this mixture as a whole. Where applicable, occupational exposure limits for individual components should be observed in accordance with local regulations.

Engineering Controls

Use in a well-ventilated area. Provide local exhaust ventilation where vapors, mist, or airborne particulates may be generated. Maintain eyewash stations and hand-washing facilities in work areas.

Eye / Face Protection

Wear safety glasses with side shields or chemical splash goggles where splashing or contact is possible.

Skin / Hand Protection

Wear chemical-resistant protective gloves (e.g., nitrile) and suitable protective clothing to prevent repeated or prolonged skin contact.

Respiratory Protection

Respiratory protection is not normally required under normal conditions of use with adequate ventilation. If ventilation is insufficient, or vapors, aerosols, dust, or mist are generated, use approved respiratory protection in accordance with applicable regulations.

General Hygiene Measures

Wash hands thoroughly after handling and before breaks, eating, drinking, or smoking. Remove contaminated clothing and wash before reuse. Avoid contact with skin, eyes, and clothing.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

General Information

Appearance

Form: Liquid
Color: Pigmented (varies by product variant)
Odor: Fruity, ester-like odor.
Odor Threshold: Not available

pH value at 20°C (68°F): Not applicable (non-aqueous)

Melting point/Melting range: Not available

Boiling point/Boiling range: Not available

Flash point: 93 °C (>200 °F) (PMCC)

Evaporation rate: Not available

Flammability (solid, gaseous): Not available

Auto-Ignition Temperature: Not available

Decomposition temperature: Not available

Explosion limits

Lower: Not available

Upper: Not available

Vapor Pressure: Not available

Density: Not available

Relative density: Not available

Solubility: Nearly insoluble in water

Vapor Density: Not available

Evaporation rate: Not available

Partition coefficient (n-octanol/water): Not available

Viscosity: 220–250 cP at 25 °C (77 °F) (Brookfield)

Solvent content: Not available

Organic solvents: Not available

Water: Not available

Solids content: Not available

Section 10. Stability and Reactivity

Reactivity

Stable under recommended conditions of storage and use. Uncured resin may undergo polymerization when exposed to heat, UV light, visible curing light, or contamination with reactive substances.

Chemical Stability

Stable when stored in the original sealed container under recommended storage conditions.

Possibility of Hazardous Reactions

Hazardous polymerization may occur under certain conditions, including exposure to sunlight/UV/curing light, elevated temperatures, contamination with peroxides, amines, reducing agents, or other reactive materials, inhibitor depletion, or bulk heating in closed containers.

Conditions to Avoid

Heat, direct sunlight, UV/curing light exposure, sources of ignition, contamination, and extended storage outside the recommended temperature range.

Incompatible Materials

Strong oxidizing agents, strong reducing agents, organic peroxides, amines, polymerization initiators, and strong acids or bases where reactive incompatibility may occur.

Hazardous Decomposition Products

Thermal decomposition or combustion may generate carbon monoxide, carbon dioxide, nitrogen oxides, irritating organic fumes, and acrid smoke.

Section 11. Toxicological Information

Acute Toxicity

Based on available data, the mixture is not classified for acute toxicity. Uncured material may cause irritation of the mouth, throat, or gastrointestinal tract if swallowed.

Skin Corrosion / Irritation

Not classified as corrosive. Prolonged or repeated skin contact may cause irritation, redness, or dryness.

Serious Eye Damage / Eye Irritation



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Classified as Eye Irritation Category 2. Direct contact with uncured material may cause redness, tearing, pain, and discomfort.

Respiratory Sensitization

Not classified based on available data.

Skin Sensitization

Classified as Skin Sensitization Category 1. Repeated or prolonged exposure may cause allergic skin reaction in susceptible individuals.

Germ Cell Mutagenicity

Not classified based on available data.

Carcinogenicity

Not classified based on available data. No components are identified in the source SDS as listed by IARC or NTP.

Reproductive Toxicity

Not classified based on available data.

Specific Target Organ Toxicity - Single Exposure

May cause respiratory irritation if vapors, mist, or aerosols are generated during handling or processing.

Specific Target Organ Toxicity - Repeated Exposure

Not classified based on available data.

Aspiration Hazard

Not classified.

Section 12: Ecological Information

Toxicity

Harmful to aquatic life with long lasting effects. Uncured resin components may present toxicity to aquatic organisms. Avoid release to the environment.

Persistence and Degradability

No specific data are available for the mixture. Cured material is expected to be relatively inert.

Bioaccumulative Potential

No specific data are available for the mixture.

Mobility in Soil

No specific data are available.

PBT and vPvB Assessment

This mixture has not been assessed for PBT or vPvB properties in accordance with REACH Annex XIII.

Endocrine Disrupting Properties

No determination is provided in the source SDS.

Other Adverse Effects

Prevent uncontrolled release of uncured product to drains, waterways, and soil.

Section 13. Disposal Considerations

Waste Treatment Methods

Where practical, cure uncured resin prior to disposal to reduce hazard. Dispose of contents in accordance with applicable local, regional, national, and international regulations. Do not discharge uncured material into drains, surface water, or soil. Waste classification should be determined by the waste holder based on composition, contamination, and applicable regulations.

Contaminated Packaging

Containers and packaging may retain residues of uncured resin. Do not reuse empty containers. Dispose of contaminated packaging in accordance with applicable regulations.

Cleaning Materials

Cleaning agents and contaminated absorbents should be collected and disposed of in accordance with applicable regulations. Do not discharge cleaning solutions into drains or the environment.

Section 14. Transport Information

UN Number or ID Number: Not regulated

UN Proper Shipping Name: Not regulated

Transport Hazard Class(es): Not regulated

Packing Group: Not applicable

Environmental Hazards: Not regulated as an environmentally hazardous substance for transport.

Special Precautions for User

Transport in tightly closed original containers. Prevent leakage and avoid exposure to excessive heat or direct sunlight.

Transport Regulations by Mode

U.S. DOT: Not regulated as dangerous goods.

ADR/RID: Not regulated as dangerous goods.

IMDG: Not regulated as dangerous goods; Marine Pollutant: No.

ICAO/IATA: Not regulated as dangerous goods.



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Section 15. Regulatory Information

Safety, Health and Environmental Regulations / Legislation Specific for the Substance or Mixture

This Safety Data Sheet is prepared to support hazard communication under applicable requirements, including:

OSHA Hazard Communication Standard (29 CFR 1910.1200)
Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
Regulation (EC) No 1907/2006 (REACH), as amended
Commission Regulation (EU) 2020/878 (SDS requirements)
Canada WHMIS / Hazardous Products Regulations
Australia Work Health and Safety (WHS) requirements

REACH / SVHC Status

Any applicable REACH registration, authorization, restriction, and SVHC communication obligations should be evaluated using current supplier and substance information. This SDS does not independently establish substance registration status.

PBT and vPvB Assessment

No final PBT/vPvB determination is established by the source SDS.

Endocrine Disrupting Properties

No determination is provided in the source SDS.

Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for this mixture.

Section 16. Other Information

Abbreviations and Acronyms

GHS - Globally Harmonized System of Classification and Labelling of Chemicals
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals
WHMIS - Workplace Hazardous Materials Information System
WHS - Work Health and Safety
PBT - Persistent, Bioaccumulative and Toxic
vPvB - Very Persistent and Very Bioaccumulative
STOT - Specific Target Organ Toxicity
SCBA - Self-Contained Breathing Apparatus

Key Literature References and Sources for Data

Supplier Safety Data Sheets and formulation information
OSHA Hazard Communication Standard (29 CFR 1910.1200)
Regulation (EC) No 1907/2006 (REACH)
Commission Regulation (EU) 2020/878
Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Classification Procedure

The classification of this mixture is based on available component information, applicable GHS classification criteria, and the hazard information contained in the source SDS.

Relevant Hazard Statements

H317 May cause an allergic skin reaction
H319 Causes serious eye irritation
H335 May cause respiratory irritation
H412 Harmful to aquatic life with long lasting effects

Training Advice

Users should be trained in safe handling of light-curable resin materials, appropriate personal protective equipment, prevention of skin and inhalation exposure, and proper waste handling and disposal.

Disclaimer

The information provided in this Safety Data Sheet is based on current knowledge and is intended to describe the product for health, safety, and environmental purposes only. It should not be construed as guaranteeing any specific property of the product. The user is responsible for ensuring compliance with all applicable laws and regulations.