



# Safety Data Sheet

OSHA Hazard Communication Standard 29  
CFR 1910.1200. Prepared to GHS Rev.04

# SprintRay High Impact Denture Base

## Section 1. Product and Company Identification

**Product Identification:** Photopolymer Resin  
**Product Trade Name and/or synonyms:** SprintRay High Impact Denture Base  
**Product Class:** Mixture of methacrylic acid esters, photoinitiators, proprietary pigment and additive package

**Product Use:** For use in SprintRay 3D printers  
**Company:** SprintRay Inc., 2710 Media Center Drive #100A, Los Angeles, CA 90065  
**For Emergencies:** Call CHEMTREC 800.424.9300

## Section 2. Hazard(s) Identification

### GHS Hazard Classification of the Substance or Mixture:

**Signal Word:** Warning  
**Signal Word:** Danger  
**Signal Word:** Environmental Hazard  
Skin sensitizers: Category 1B  
Hazardous to the Aquatic environment: Category Chronic 2



### Hazard Statement(s):

H315: Causes skin irritation  
H317: May cause an allergic skin reaction  
H319: Causes serious eye irritation  
H412: Harmful to aquatic life with long lasting effects, Suspected of damaging fertility or the unborn child, May cause respiratory irritation

### Precautionary Statement(s):

**Prevention:**  
P260: Do not breathe dust/fume /mist/vapors/spray.  
P264: Wash hand 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.  
P285: In case of inadequate ventilation wear respiratory 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.  
P363: Wash contaminated clothing before reuse.  
P391: Collect spillage.

### Precautionary Statement(s):

P337+P313: If eye irritation persists, get medical attention.  
P302+P352: IF ON SKIN, Wash with plenty of soap and water.  
P333+P313: If skin irritation or rash occurs, get medical attention.  
P362: Take off contaminated clothing and wash before reuse.  
P363: Wash contaminated clothing before reuse.  
P308+P313: IF exposed or concerned, get medical attention.  
**Disposal:**  
P405: Store locked up.  
P501: Dispose of contents and container in accordance with local and national regulations.

### NFPA Ratings (0-4)



Health = 1  
Fire = 1  
Reactivity = 1  
Specific Hazard = 0

### HMIS Ratings (0-4)

HEALTH	1
FIRE	2
REACTIVITY	1
PERSONAL PROTECTION	B

Health = 1  
Fire = 2  
Reactivity = 1  
Personal Protection = B

## Section 3. Composition/Information on Ingredients

Ingredient	Composition	GHS Classification**	CAS #	Hazards Identification
Proprietary Ingredient 1*	20% - 50%	H319, H315, H400, H410, H302, H315, H320, H317	Proprietary	Skin Irritation – Category 2, H315 Eye Irritation – Category 2A, H319 Skin sensitization – Category 1, H317 Chronic aquatic toxicity – Category 3, H412
Proprietary Ingredient 2*	20% - 50%	H317, H319, H411	Proprietary	Skin sensitization, Sub-category 1B, H317 Chronic aquatic toxicity – Category 2, H411
Proprietary Ingredient 3*	20% - 50%		Proprietary	Eye Irritation - Category 2A Skin Sensitization – Category 1
Proprietary Ingredient 4*	0.3% - 5%	Repr. 2 (H361)	Proprietary	Reproductive Toxicity – Category 2
Proprietary Ingredient 5*	10% - 30%		Proprietary	Not a hazardous substance or mixture
Proprietary Ingredient 6*	10% - 30%		Proprietary	Skin Corrosion/Irritation – Category 2 Serious Eye Damage/Eye Irritation – Category 2 STOT (single exposure) – Category 3 Target Organs – Respiratory system

\*The specific chemical identity is withheld because it is trade secret information of SprintRay

\*\* For the full text of the H-Statements mentioned in this Section, see Section 16

## Section 4. First-Aid Measures

**After inhalation:** Remove from source of exposure into fresh air. Seek medical attention if any irritation develops.

**After skin contact:** Wash skin with soap and water. Remove any contaminated clothing and shoes and clean before reuse. Seek medical attention if irritation develops.

**Information for Doctors:** Treat symptoms conventionally after thorough decontamination.

**After swallowing:** First aid is unlikely to be required but if necessary, rinse mouth repeatedly with water, ensuring that the water is not swallowed. Seek medical attention.

**After eye contact:** Hold eye open and rise continuously with a gentle stream of clean running water for at least 15 minutes. Seek medical attention if any irritation develops.

## Section 5. Fire-Fighting Measures

**Suitable extinguishing agents:** Chemical foam, carbon dioxide or dry chemical extinguishers.

**Special hazards arising from the substance or mixture:** Formation of toxic, irritating gases is possible from the decomposition of the methacrylate resins. Heat can cause polymerization with rapid release of energy.

**Advice for firefighters:** Wear full protective equipment (bunker gear) and a self-contained breathing apparatus. (SCBA). Water may not be effective in extinguishing a fire involving this product.

**Protective equipment:** Wear full protective equipment (bunker gear) and a self-contained breathing apparatus. SCBA). Water may not be effective in extinguishing a fire involving this product.

## Section 6. Accidental Release Measures

**Environmental precautions:** Avoid releases to the environment. Report releases as required by local and national authorities.

**Methods and material for containment and cleaning up:** Exposure to sunlight or artificial light will cause the resin to polymerize. Spread the paste to maximize the surface area. Once the material is hard, pick up and place into a container for disposal.

**Personal precautions, protective equipment and emergency procedures:** Safety glasses with side shields, gloves and laboratory coat recommended.

**Reference to other sections:** Refer to Section 8 for Personal Protective Equipment and Section 13 for Disposal information.

## Section 7. Handling and Storage

**Precautions for safe handling:** Avoid contact with the eyes, skin and clothing. Avoid breathing dust or fumes. Wear protective clothing and equipment as described in Section 8. Use with adequate ventilation. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Do not reuse containers. Empty containers retain product residues and can be hazardous. Follow all SDS precautions when handling empty containers.

**Conditions for safe storage, including and incompatibilities:** Store in a tightly closed container in a cool (15–25 °C /60–77 °F), well-ventilated location away from incompatible materials. Do not store near high temperatures, light or ignition sources. Do not store in an oxygen-free environment. Avoid freezing the material.

**Specific end use(s):** For professional use only.

## Section 8. Exposure Controls / Personal Protection

**Control parameters:** Use in an enclosed process area is recommended.

**Personal protective equipment:** Depending on the conditions of use, protective gloves, apron, boots, head and face protection should be worn. Eye protection such as chemical splash goggles and/or face shield must be worn when the possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapor.

**General protective and hygienic measure:** Wash hands after handling material and before eating. See section 7 for full protective measures.

**Eye protection:** Use of safety goggles with side shields is recommended.

**Breathing Equipment:** None should be needed from normal use. If this material is handled at elevated temperature or under mist forming conditions, approved respiratory protection equipment should be used. Selection and use of respiratory equipment must be in accordance with applicable regulations and good industrial hygiene practice.

**Protection of hands:** Gloves are recommended. Depending on the conditions of use, lab coat and/or arm shields may be used.

**Material of gloves, Penetration time of glove material:** N/D

## Section 9. Physical and Chemical Properties

General Information on basic physical and chemical properties.

**Form:** Colored Liquid

**Color:** Colored, or having an intentionally added pigmented

**Odor:** Fruity, ester-like odor.

**Odor Threshold:** N/D

**pH value at 20oC (68oF):** N/D

**Change in Condition**

**Melting point/Melting range:** N/D

**Boiling point/Boiling range:** N/D

**Flash point:** (PMCC) GT 93C/200F

**Flammability (solid, gaseous):** N/D

**Ignition Temperature:** N/D

**Decomposition temperature:** N/D

**Auto igniting:** N/D

**Danger of explosion:** N/D

**Solids content:** N/D

**Other information: Specific Gravity:** 1.10-1.125 at 25C/77F

**Explosion limits:** N/D

**Lower:** N/D

**Upper:** N/D

**Vapor Pressure at 20oC (68oF):** N/D

**Density at 20oC (68oF):** N/D

**Relative Density:** N/D

**Vapor Density:** N/D

**Evaporation rate:** N/D

**Miscibility with Water:** Nearly insoluble in water.

**Partition coefficient (n-octanol/water):** N/D

**Viscosity Units, Temp. (Brookfield):** 220-250 cps at 25C/77F

**Solvent content:** N/D

**Organic solvents:** N/D

**Water:** N/D

## Section 10. Stability and Reactivity

**Reactivity:** None known.

**Chemical Stability:** Stable if handled and stored as directed.

**Thermal decomposition/Conditions to avoid:** Avoid heat, light and sources of contamination.

**Hazardous decomposition products:** Thermal decomposition may release acrid smoke or fumes, carbon and nitrogen oxides.

**Possibility of hazardous reactions/Conditions to avoid:** Heat, light, sources of contamination or inhibitor depletion may cause spontaneous polymerization generating heat and pressure. Closed containers may rupture or explode during runaway polymerization.

**Incompatible materials:** Reducing and oxidizing agents, peroxides and amines.

## Section 11. Toxicological Information

**Information on Likely Routes of Exposure:**

**Eye Contact:** No known effect<sup>4</sup>, Not irritating (rabbit)-Irritation Index 0/1102, Causes serious eye irritation<sup>1,3</sup>

**Skin Contact:** Not irritating (rabbit)-Irritation Index 0/8 (4h)<sup>2,5</sup> Causes skin irritation<sup>1</sup>, May be harmful<sup>4</sup>

**Inhalation:** Not expected to cause respiratory tract irritation<sup>3,4</sup>

**Ingestion:** Not expected to be an ingestion hazard<sup>3,4</sup>, May be harmful if swallowed<sup>1</sup>

**Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure**

**Skin Irritation:** Not irritating<sup>3,4</sup>, Mild skin irritation (rabbit) Draize (24h)occluded exposure<sup>2</sup>

**Sensitization, Skin:** Sensitizer<sup>1,3,4</sup> May cause allergic skin reaction (Guinea Pig Maximization Test)<sup>2</sup>, Not a sensitizer (Buehler Test)<sup>2</sup>, Not known<sup>5</sup>

**Numerical Measures of Acute Toxicity:**

**Dermal (rabbit) LD50 = or > 2000 mg/kg<sup>1,2,3</sup>, LD50 (rats) >5000 mg/kg<sup>2,3,4,5</sup>**

**Inhalation LC0 rat = 6.7 mg/L<sup>1</sup>; 0.477 mg/L for 4 h<sup>5</sup>**

**Ingestion/Oral (rat) LD50 = 1590 mg/kg<sup>1</sup>, 5564 mg/kg<sup>2</sup>, 5000 mg/kg<sup>4</sup>**

**Germ Cell Mutagenicity:** No genetic changes were observed<sup>1,2,3,4,5</sup>, positive & negative changes observed when cells were used instead of bacteria<sup>2</sup>

**Carcinogenicity:** No increase in tumor incidence reported<sup>2,3,5,6</sup>

**Reproductive Toxicity:** No negative effects<sup>5</sup>, Oral(rats) increased mortality in Offspring<sup>1</sup>. No effects on fertility<sup>2,3</sup>. Ingredient is suspected to cause reproductive hazard<sup>4</sup> OECD Test 414, Prenatal Development Toxicity Study, NOAEL (rat, oral 14 days)=150 mg/kg bw/day<sup>4</sup>, OECD Test 421 Reproduction/Development Toxicity Screening Test NOAEL(rat, oral 127 days) = 60 mg/kg bw/day<sup>4</sup>

**Teratogenicity:** Not reported to produce teratogenic effects in humans<sup>3</sup>

**Specific Target Organ Toxicity, Single Exposure:** N/A or none known<sup>1,2,3,5</sup>

**Specific Target Organ Toxicity, Repeated Exposure:** None known<sup>3,5</sup>, Repeated dermal administration to hen : Nervous System Injury<sup>1</sup>, Rats – Adrenal Gland<sup>1</sup>, Testes<sup>1</sup>, Liver<sup>2</sup>, Kidney<sup>2</sup>, OECD Test 408 Repeated Dose 90-Day Oral Toxicity Study in rodents NOAEL = 100 mg/kg bw/day<sup>4</sup>

### LEGEND

1 = Proprietary Ingredient 1

2 = Proprietary Ingredient 2

3 = Proprietary Ingredient 3

4 = Proprietary Ingredient 4

5 = Proprietary Ingredient 5

6 = Proprietary Ingredient 6

## Section 12: Ecological Information

**Aquatic Toxicity:** None of the components are listed.  
**Persistence and degradability:** No data is currently available.  
**Behavior in environmental systems:** No data is currently available.  
**Bioaccumulative potential:** No data is currently available.  
**Mobility in Soil:** No data is currently available.

**Additional ecological information:** No additional data is available.  
**General Notes:** Release into the environment should be avoided. Refer to section 13 for disposal information.  
**Results of PBT and vPvB assessment:** N/D  
**Other adverse effects:** None known.

## Section 13. Disposal Considerations

**Waste Treatment Recommendation:** Cure material before disposal. Dispose in accordance with all federal, state and local regulations. Consult state and local hazardous waste regulations to ensure complete and accurate classification of waste. US EPA guidelines for the classification of hazardous waste are found in 40 CFR part 261.3.

**Uncleaned packaging recommendation:** Rinse with alcohol. Contain and dispose of rinse material according to all federal, state and local regulations.  
**Recommended cleansing agent:** Isopropyl Alcohol 91%

## Section 14. Transport Information

**DOT, ADR, IMDG, IATA:** Not Regulated  
**UN proper shipping name:** N/A  
**Transport Hazard Class(es):** Not Regulated

**Danger code (Kemler):** N/A  
**EMS Number:** N/A  
Transport in bulk according to Annex 1 of MARPOL73/78 and the IBC Code: N/A

## Section 15. Regulatory Information Safety, health and environmental regulations / legislation specific for the substance or mixture.

**Immediate Hazard:** Yes  
**Delayed Hazard:** Yes  
**Fire Hazard:** No  
**Pressure Hazard:** No  
**Reactivity Hazard:** No  
**Section 355 (extremely hazardous substances):** None.  
**Section 313 (Specific toxic chemical listings):** None.  
**TSCA (Toxic Substances Control Act):** None of the components are listed.  
**Proposition 65:** Chemicals known to the state of California to cause cancer and/or reproductive toxicity: None.  
**Chemicals known to cause developmental toxicity:** None known.  
**EPA (Environmental Protection Agency):** None of the components are listed.  
**TLV (Threshold Limit Value established by ACGIH):** None of the components are listed.  
**NIOSH-Ca (National Institute for Occupational Safety and Health):** None of the components are listed.

**OSHA-Ca (Occupational Safety & Health Administration):** None of the components are listed.  
**GHS Label elements:** This product is classified and labeled according to the Globally Harmonized System (GHS)

**Hazard pictograms:**



**Signal Word:** Environmental Hazard  
**Signal Word:** Warning  
**Signal Word:** Danger  
**Hazard-determining components of labeling:** See Section 2.  
**Hazard statements:** See Section 2.  
**Precautionary statements:** See Section 2.  
**Chemical Safety Assessment:** A Chemical Safety Assessment has not been carried out.