

Safety Data Sheet

SprintRay NightGuard Flex

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

Section 1. Product and Company Identification

Product Identification: Biocompatible Photopolymer Resin
Product Trade Name and/or synonyms: SprintRay NightGuard Flex
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



Precautionary Statement(s):

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P261 Avoid breathing dust or fume. (uncured material only)
- P264 Wash 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.
- P305+P351+P338 IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Hazard Statement(s):

- H315: Causes skin irritation
- H317: May cause an allergic skin reaction
- H319: Causes serious eye irritation
- H411: Toxic to aquatic life with long lasting effects

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.
- P405 Store locked up.
- P501 Dispose of contents and container in accordance with local and national regulations.

Description of any hazards not otherwise classified: N/A

For a mixture, the percentage of total ingredient(s) of ingredient(s) with unknown acute toxicity: 2%

NFPA Ratings (0-4)



Health = 0
 Fire = 0
 Reactivity = 0

HMS Ratings (0-4)



Health = 0
 Fire = 0
 Reactivity = 0

Section 3. Composition/Information on Ingredients

Ingredient(s)	Composition	GHS Classification	CAS #	Hazards Identification
Proprietary Methacrylate Oligomer*	20% - 50%	H319, H315, H411	Proprietary	Skin Irritation – Category 2, H315 Eye Irritation – Category 2A, H319
Proprietary Methacrylate Monomer*	20% - 50%	H315, H317, H411	Proprietary	Skin irritation – Category 2, H315 Skin Sensitization -Category 1B, H317 Chronic aquatic toxicity – Category 2, H411
Proprietary Methacrylate Monomer*	20% - 50%	H317	Proprietary	Skin Sensitization – Category 1, H317
Proprietary Photoinitiator*	0.3% - 5%	Repr. 2 (H361)	Proprietary	Reproductive Toxicity – Category 2
Proprietary Pigment 1*	-	Skin Sensitization – Category 1	Proprietary	Skin Sensitization – Category 1
Proprietary Pigment 2*	-	Skin Sensitization – Category 1	Proprietary	Skin Sensitization – Category 1

*Denotes that the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

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 effect⁴, Not irritating (rabbit)^{3,2}, Causes serious eye irritation¹

Skin Contact: Causes skin irritation^{1,2}, May be harmful⁴, Adverse symptoms may include irritation and redness^{5,6}. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels^{5,6}

Inhalation: Not expected to cause respiratory tract irritation⁴, No data available²

Ingestion: Not expected to be an ingestion hazard⁴

Other information: Possible cross sensitization with other acrylates and methacrylates¹

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

Skin Irritation: Not irritating (rabbit; 4 h)³, Repeated sub-chronic administration to mouse/signs: Local Irritation/No adverse systemic effects³

Sensitization, Skin: Sensitizer^{2,4} May cause allergic skin reaction², Weak sensitizing effect by skin contact (Metod OECD Test Guideline 429 LLNA, Mouse², Local Lymph Node Assay (LLNA) (mouse): Skin allergy was observed³

Ingestion/Oral (rat) , LD50 > 10,000 mg/kg⁴ ,LD50 > 2,000 mg/kg(Method: OECD Test Guideline 423)²

Numerical Measures of Acute Toxicity:

Dermal: LD50 (mouse) > 2000 mg/kg³, LD50 (rats) >5000 mg/kg⁴ Slightly or not harmful in contact with skin (rabbit): No mortality/Rat: 2000 mg/kg:(Method OECD Test Guideline 402)²

Germ Cell Mutagenicity: No genetic changes were observed⁴, Results from in-vitro and in-vivo tests do not lead to considering the product as genotoxic – Ames test In-vitro: Inactive (Method OECD Test Guideline 471; In-vitro mammalian cell gene mutation test: Inactive (Method OECD Guideline 476); Micronucleus Test in-vivo mouse: Inactive OECD Test Guideline 474)²
Carcinogenicity: No data is available²

Reproductive Toxicity: Ingredient is suspected to cause reproductive hazard⁴OECD Test 414, Prenatal Development Toxicity Study, NOAEL (rat, oral 14 days)=150 mg/kg bw/day⁴, OECD Test 421 Reproduction/Development Toxicity Screening Test NOAEL(rat, oral 127 days) = 60 mg/kg bw/day⁴, FERTILITY -based on available data, does not cause effects on the reproduction/fertility in animal studies – NOAEL (Parental Toxicity & Fertility): 250 mg/kg bw/day (Method OECD Test Guideline 422, Rat, by oral route)

Developmental Toxicity: No birth effects were observed^{1,3}, FOETAL DEVELOPMENT: based on available data, the substance is not suspected of having developmental toxic potential. Embryo-foetal development-absence of toxic effects for foetal development. NOAEL (Maternal & Developmental Toxicity): 300 mg/kg bw/day (Method OECD Test Guideline 414, Rat, by oral route) ²

Specific Target Organ Toxicity, Single Exposure: Possible irritation of respiratory system

Specific Target Organ Toxicity, Repeated Exposure: Substance is not classified as specific target toxicant. By oral route – No specific toxic effects, NOAEL = 250 mg/kg (Method OECD Test Guideline 422, Rat), Local Irritation of the stomach – NOAEL = 100 mg/kg²

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): Packing Group 3 - Low Danger

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: Warning

Signal Word: Danger

Signal Word: Environmental Hazard

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.

Section 16. Other Information

Abbreviations and Acronyms: None.

Other information not contained elsewhere: None.