

SAFETY DATA SHEET

Classified in accordance 29 CFR 1910.1200

1. Identification

Product identifier: INFINAM® P3 Deflect™ 120

Other means of identification

None.

Recommended restrictions

Recommended use: 3D printing
Restrictions on use: Not determined.

Manufacturer/Importer/Distributor Information

Company Name : Evonik Corporation
299 Jefferson Road
Parsippany, NJ 07054
USA

Telephone : +1 973 929 8000

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E-mail : product-regulatory-services@evonik.com

Emergency telephone number:

24-Hour Health : +1 800 424 9300 (CHEMTREC - US & CANADA)
Emergency : 800 681 9531 (CHEMTREC MEXICO)
+1 703 527 3887 (CHEMTREC WORLD)

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Substances and mixtures which undergo vigorous polymerization Category 1

Health Hazards

Serious Eye Damage/Eye Irritation Category 2B
Skin sensitizer Category 1

Label Elements

Hazard Symbol:



Signal Word: Warning

Hazard Statement:
 Causes eye irritation.
 May cause an allergic skin reaction.
 Vigorous polymerization may cause a fire or explosion.

Precautionary Statements

Prevention: Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response: IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see on this label). If eye irritation persists: Get medical advice/attention. Collect spillage.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%) [*]
Urethane Methacrylate	Trade Secret	Trade Secret	20 - <90%
Proprietary hydroxyester compound	Trade Secret	Trade Secret	20 - <90%
Methacrylated Oligomer	Trade Secret	Trade Secret	10 - <90%
Bisacylphosphine oxide	Trade Secret	Trade Secret	1 - <5%
difunctional methacrylate	Trade Secret	Trade Secret	0.1 - <1%

^{*} All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition Comments: Resin.

Trade secret information: A specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Description of necessary first-aid measures

General information:	Pay attention to self-protection. Move out of dangerous area. Keep warm, position comfortably, and cover well. Do not leave the victim unattended.
Inhalation:	Move to fresh air. Get medical attention immediately.
Skin Contact:	Wash off affected area immediately with plenty of water for at least 15 minutes. Get medical attention immediately.
Eye contact:	Rinse immediately with plenty of water for 15 minutes and seek advice of an eye specialist.
Ingestion:	Do NOT induce vomiting. Seek medical advice.
Personal Protection for First-aid Responders:	No data available.

Most important symptoms/effects, acute and delayed

Symptoms:	irritant effects sensitising effects
Hazards:	No data available.

Indication of immediate medical attention and special treatment needed

Treatment:	Continue with first aid measures. Depending on the pathology and clinical findings, patient monitoring and symptomatic treatment are necessary.
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5. Fire-fighting measures**Suitable (and unsuitable) extinguishing media**

Suitable extinguishing media: Water spray, foam, CO₂, dry powder.

Unsuitable extinguishing media: High volume water jet.

Specific hazards arising from the chemical: May be released in case of fire: carbon monoxide, carbon dioxide, organic products of decomposition. Nitrogen Oxides Under certain conditions of combustion traces of other toxic substances cannot be excluded

Special protective equipment and precautions for firefighters

Special fire fighting procedures: As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear. Also keep emptied containers away from sources of heat and ignition. Containers exposed to heat (fire) may build up pressure. Cool by splashing with water. Water for fire fighting must not be introduced in the sewer system, subsoil, or surface waters. Assure that there are sufficient fire water retaining facilities Contaminated fire fighting water must be disposed of in conformity with the regulations of the local authorities.

Special protective equipment for fire-fighters: As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Do not breathe vapours or spray mist.
Methods and material for containment and cleaning up:	Absorb with liquid-binding material e.g. universal binder Fill into marked, sealable containers. Dispose of contaminated material as a waste in a correct manner.
Environmental Precautions:	Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, rivers, groundwater or soil.

7. Handling and storage

Handling

Technical measures (e.g. Local and general ventilation):	If possible, use material transfer/filling, metering and blending plants that are closed.
Safe handling advice:	A safety shower and eye wash fountain should be readily available. To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product. Provide sufficient ventilation and exhaust at the workplace. Stir and/or shake well before use.
Contact avoidance measures:	No data available.

Storage

Safe storage conditions:	<p>Take precautionary measures against static discharges. Keep away from sources of ignition - No smoking. Protect from light. Keep containers tightly closed in a cool, well-ventilated place. This material may have a low electrical conductivity and therefore may accumulate dangerous levels of static electricity. An ignitable vapor-air mixture can form inside storage tanks.</p> <p>The user must be sure to dissipate static charge by careful bonding and grounding of all equipment and personnel involved in fluid transfer with continuity checks to prove effectiveness. Additional precautions against fire and explosion are the use of inert gas to purge vapor space; dip-pipes while filling vessels, especially lined vessels; grounded tank level floats; reduced flow velocity; self-closing valves on transfer lines and flame arrestors in vent lines.</p> <p>Additional guidance on fire and explosion protection may be found in various consensus standards, including NFPA 30, 69 and 77 and API 2003 as well as OSHA regulation 29CFR1910.106.</p> <p>Follow all SDS/label precautions even after container is emptied because it may retain product residues. Residual vapors might explode on ignition; do not apply heat, cut, drill, grind or weld on or near this container. Recommended storage temperature: 10 - 30 °C. Length of storage <= 12 months</p>
Safe packaging materials:	No data available.
Storage Temperature:	10 - 30 °C

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

Biological Limit Values

No biological exposure limits noted for the ingredient(s).

Appropriate Engineering Controls If possible, use material transfer/filling, metering and blending plants that are closed.

Individual protection measures, such as personal protective equipment

Eye/face protection: close-fitting protective goggles (e.g. closed goggles) or face protection

Skin Protection

Hand Protection: Material: nitrile rubber (Camatril Velours)
Break-through time: > 30 min
Additional Information: No protective glove type has been specified for use with this product. The glove listed is only a preliminary recommendation issued by Kächele-Cama Latex GmbH, Am Kreuzacker 9, D-36124 Eichenzell, www.kcl.de, which firm offers such protective gloves. The glove must be changed immediately if any changes in it occur (e.g. swelling, wear). Additional Information: The above mentioned hand protection is based on knowledge of the chemistry and anticipated uses of this product but it may not be appropriate for all workplaces. A hazard assessment should be conducted prior to use to ensure suitability of gloves for specific work environments and processes prior to use.

Skin and Body Protection: Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

Respiratory Protection: In case of dusts/vapours/aerosols being formed or if the limit values like TLV are exceeded: use respiratory equipment with suitable filter or wear a self contained respiratory apparatus

Hygiene measures: Avoid contact with skin and eyes. Do not breathe in vapours or aerosols. Take off immediately all contaminated clothing. When using do not eat, drink or smoke.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state: liquid
Form: Viscous Liquid
Color: Black
Odor: Characteristic
Odor Threshold: Not determined., Not required by safety or application considerations.

Freezing point:	No data available. Not required by safety or application considerations.
Boiling Point:	No data available.
Flammability:	Not applicable liquid
Upper/lower limit on flammability or explosive limits	
Explosive limit - upper:	see Explosiveness
Explosive limit - lower:	see Explosiveness
Flash Point:	266 °F/130 °C (ASTM D 3278)
Self Ignition Temperature:	No data available. Not required by safety or application considerations.
Decomposition Temperature:	No data available. Not required by safety or application considerations.
pH:	Not applicable substance/mixture is non-soluble (in water)
Viscosity	
Dynamic viscosity:	450 mPa.s (77 °F/25 °C)
Kinematic viscosity:	113.69 mm ² /s (104 °F/40 °C)
Flow Time:	Not applicable
Solubility(ies)	
Solubility in Water:	Practically Insoluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available. Not required by safety or application considerations.
Vapor pressure:	No data available. Not required by safety or application considerations.
Relative density:	1.0958
Density:	Not applicable
Bulk density:	Not applicable
Relative vapor density:	Not applicable
Particle characteristics	
Particle Size Distribution:	Not applicable
Specific surface area:	Not applicable
Surface charge/Zeta potential:	Not applicable
Assessment:	Not applicable
Shape:	Not applicable
Crystallinity:	Not applicable
Surface treatment:	Not applicable
Other information	
Explosive properties:	Not explosive
Oxidizing properties:	The substance or mixture is not classified as oxidizing.
Minimum ignition temperature:	The substance or mixture is not classified as pyrophoric. The substance or mixture is not classified as self heating.
Formation of Flammable Gases:	Substance or mixture, which in contact with water, does not emit flammable gas
Peroxides:	The substance or mixture is not classified as organic peroxide.
Metal Corrosion:	Not corrosive to metals
Evaporation Rate:	No data available. Not required by safety or application considerations.

10. Stability and reactivity

Reactivity: No data available.

Chemical Stability:	No data available.
Possibility of hazardous reactions:	Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions.
Conditions to avoid:	Protect against exposure to light, heat, sources of ignition. The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is exceeded, the product may polymerize with heat evolution.
Incompatible Materials:	Peroxides, amines, sulfur compounds, heavy metal ions, alkalis, reducing agents and oxidizing agents. Mineral Acid Free radical initiators
Hazardous Decomposition Products:	None when used as directed.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	Information on effects are given below.
Skin Contact:	Information on effects are given below.
Eye contact:	Information on effects are given below.
Ingestion:	Information on effects are given below.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product: Not classified for acute toxicity based on available data.

Dermal

Product: ATEmix: 2,512.06 mg/kg

Inhalation

Product: Not classified for acute toxicity based on available data.

Repeated dose toxicity

Product: No data available.

Skin Corrosion/Irritation

Product: No data available.

Components:

Urethane Methacrylate	OECD 404 (Rabbit): Not irritating , 4 h
Proprietary hydroxyester compound	Draize (Rabbit): Not irritating , 24 h
Methacrylated Oligomer	OECD 439 (Human, reconstructed epidermis (RhE) model): Not irritating
Bisacylphosphine oxide difunctional methacrylate	OECD 404 (Rabbit): Not irritating FDA 1959 Draize, occlusive (Rabbit): Not irritating , 24 h

Serious Eye Damage/Eye Irritation

Product: No data available.

Components:

Urethane Methacrylate	Not irritating OECD 405 Rabbit:
Proprietary hydroxyester compound	Moderately irritating Draize Rabbit:
Methacrylated Oligomer	Not irritating OECD 437 Bovine cornea:
Bisacylphosphine oxide difunctional methacrylate	Not irritating OECD 405 Rabbit: Not irritating Draize Rabbit:

Respiratory or Skin Sensitization

Product: No data available.

Components:

Urethane Methacrylate	Local Lymph Node Assay (LLNA), OECD 429 (Mouse): Skin sensitizer
Proprietary hydroxyester compound	Buehler Test (Guinea Pig): Skin sensitizer
Methacrylated Oligomer	Sensitization test, OECD 406 (Guinea Pig): Skin sensitizer
Bisacylphosphine oxide difunctional methacrylate	Maximization Test, OECD 406 (Guinea Pig): Strong skin sensitizer. Local Lymph Node Assay (LLNA), OECD 429 (Mouse): Skin sensitizer

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogens present or none present in regulated quantities

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogens present or none present in regulated quantities

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:

No carcinogens present or none present in regulated quantities

Germ Cell Mutagenicity
In vitro

Product: No data available.

Components:

Urethane Methacrylate	Ames test (OECD 471): negative gene mutation test (HGPRT-Test): negative
Proprietary hydroxyester compound	Ames test (OECD 471): negative
Methacrylated Oligomer	gene mutation test (OECD 476): negative Ames test (OECD 471): negative Micronucleus test (OECD 487): negative
Bisacylphosphine oxide difunctional methacrylate	gene mutation test (OECD 471): negative Chromosomal aberration (OECD 473): negative gene mutation test (OECD 476): negative Chromosomal aberration (OECD 473): positive

In vivo

Product: No data available.

Components:

Proprietary hydroxyester compound	Micronucleus test (OECD 474) pharyngeal probe (Rat, Male): negative
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Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product:	No data available.
Components:	
Urethane Methacrylate	Not classified
Proprietary hydroxyester compound	Not classified
Methacrylated Oligomer	Not classified
Bisacylphosphine oxide difunctional methacrylate	Not applicable
	Not classified

Information on health hazards
Other hazards

Product:	No toxicological tests have been conducted with the product itself.;
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12. Ecological information
Ecotoxicity:
Acute hazards to the aquatic environment:
Fish

Product:	No data available.
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Aquatic Invertebrates

Product:	No data available.
Components:	
Urethane Methacrylate	EC 50 (Daphnia magna, 48 h): > 1.2 mg/l No toxicity at the limit of solubility
Proprietary hydroxyester compound	EC 50 (Daphnia magna, 48 h): 380 mg/l
Methacrylated Oligomer	EC 50 (Daphnia magna, 48 h): 2.36 mg/l
Bisacylphosphine oxide difunctional methacrylate	In the range of water solubility not toxic under test conditions. EC 50 (Daphnia magna, 48 h): 44.9 mg/l

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
Urethane Methacrylate	EC 50 (Desmodesmus subspicatus (green algae), 72 h): > 0.68 mg/l (OECD 201) No toxicity at the limit of solubility
Proprietary hydroxyester compound	EC 50 (Selenastrum capricornutum (green algae), 72 h): 836 mg/l
Methacrylated Oligomer	EC 50 (Algae (Pseudokirchneriella subcapitata), 72 h): 1.6 mg/l (OECD 201) EC 50 (Algae (Pseudokirchneriella subcapitata), 72 h): 0.71 mg/l (OECD 201)
difunctional methacrylate	EC 50 (Algae (Pseudokirchneriella subcapitata), 72 h): 17.3 mg/l (OECD 201)

Toxicity to microorganisms

Product:	No data available.
Components:	
Proprietary hydroxyester compound	EC 50 (Pseudomonas fluorescens, 16 h): > 3,000 mg/l
difunctional methacrylate	EC 50 (Pseudomonas putida, 3 h): 570 mg/l (OECD 209)

Chronic hazards to the aquatic environment:
Fish

Product:	No data available.
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Aquatic Invertebrates

Product:	No data available.
Components:	
Proprietary hydroxyester compound	NOEC (Daphnia magna, 21 d): 24.1 mg/l
difunctional methacrylate	NOEC (Daphnia magna, 21 d): 5.05 mg/l

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
Proprietary hydroxyester compound	NOEC (Selenastrum capricornutum (green algae), 72 h): 400 mg/l

Toxicity to microorganisms

Product:	No data available.
Components:	
Methacrylated Oligomer	NOEC (activated sludge, 28 d): 100 mg/l

Persistence and Degradability**Biodegradation**

Product:	No data available.
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BOD/COD Ratio

Product:	No data available.
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Bioaccumulative potential**Bioconcentration Factor (BCF)**

Product:	No data available.
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Partition Coefficient n-octanol / water (log Kow)

Product:	Log Kow: No data available. Not required by safety or application considerations.
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Mobility in soil:

Product	No data available.
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Results of PBT and vPvB assessment:

Product	No data available.
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Other adverse effects:**Other hazards**

Product:	No further ecotoxicological data are available.
Components:	
difunctional methacrylate	Prevent substance from entering soil, natural bodies of water and sewer systems. Prevent substance from entering soil, natural bodies of water and sewer systems. Prevent substance from entering soil, natural bodies of water and sewer systems.

13. Disposal considerations

Disposal methods: Waste must be disposed of in accordance with federal, state and local regulations. Incineration is the preferred method.

Contaminated Packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

Domestic regulation

49 CFR

UN/ID/NA number : UN 3082
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
((octahydro-4,7-methano-1H-indenediyl)bis(methylene)diacrylate)
Class : 9
Packing group : III
Labels : 9
ERG Code : 171
Marine pollutant : yes
Remarks : Protected from sources of heat.

International Regulations

IATA-DGR

UN/ID No. : UN 3082
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
((octahydro-4,7-methano-1H-indenediyl)bis(methylene)diacrylate)
Class : 9
Packing group : III
Labels : 9MI
Packing instruction (cargo aircraft) : 964
Packing instruction (passenger aircraft) : 964

IMDG-Code

UN number or ID number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
((octahydro-4,7-methano-1H-indenediyl)bis(methylene)diacrylate)
Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15. Regulatory information**US Federal Regulations****TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

None present or none present in regulated quantities.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

Reportable Quantity not reasonably exceeded.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard categories**

Serious eye damage or eye irritation, Respiratory or Skin Sensitization

US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances

None present or none present in regulated quantities.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

Reportable Quantity not reasonably exceeded.

US State Regulations**US. California Proposition 65**

No ingredient requiring a warning under CA Prop 65.

US. New Jersey Worker and Community Right-to-Know Act

No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List

No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances

No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

Inventory Status:

Australia AICS:	Not in compliance with the inventory.	
Canada DSL Inventory List:	Not in compliance with the inventory.	

Product name: INFINAM® P3 Deflect™ 120

China Inv. Existing Chemical Substances:	E (special case)	Simplified notification under specific conditions. Valid only for specific importer.
Japan (ENCS) List:	Not in compliance with the inventory.	
Korea Existing Chemicals Inv. (KECI):	Exemption only valid for specific importer.	
New Zealand Inventory of Chemicals:	Not in compliance with the inventory.	
Philippines PICCS:	Not in compliance with the inventory.	
Taiwan Chemical Substance Inventory:	Not in compliance with the inventory.	
US TSCA Inventory:	On or in compliance with the inventory	Commercial Status: Active
EINECS, ELINCS or NLP:	On or in compliance with the inventory	EU-REACH compliant for Evonik Operations GmbH and its affiliates as EU manufacturer/EU importer.

16. Other information, including date of preparation or last revision
HMIS Hazard ID

Health	2
Flammability	0
Physical Hazards	2
PERSONAL PROTECTION	

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

Issue Date: 07/09/2021

Version #: 3.0

Further Information: No data available.

Revision Information Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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