

1. Identification**Product identifier** RPU 130 Part A**Other means of identification****Product code****Recommended use** 3D printing resin.**Recommended restrictions****Manufacturer/Importer/Supplier/Distributor information****Manufacturer/Supplier** Carbon, Inc.**Address** 1089 Mills Way
Redwood City, CA 94063 USA**General information** 1-650-285-6307**Email** info@carbon3D.com**Emergency telephone number** For Hazardous Materials Incidents ONLY (spill, leak, fire, exposure or accident), call CHEMTREC 24/7 at:**International** (+)1-703-741-5970**USA, Canada, Mexico** (+)1-800-424-9300**2. Hazard(s) identification****Physical hazards** Not classified.**Health hazards** Sensitization, skin Category 1
Reproductive toxicity Category 2**OSHA defined hazards** Not classified.**Label elements****Signal word** Warning**Hazard statement** May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child.**Precautionary statement****Prevention**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing mist/vapor. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

Response

If on skin: Wash with plenty of water. If exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Storage

Store locked up.

Disposal

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

Hazard(s) not otherwise classified (HNOC) None known.**Supplemental information** The toxicological properties of this material have not been fully investigated. >90% of the mixture consists of component(s) of unknown acute toxicity.**3. Composition/information on ingredients****Mixtures**

Chemical name	CAS number	%
Ethylene glycol dimethacrylate	97-90-5	< 10

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	< 1
Trimethylolpropane triacrylate	15625-89-5	< 1

Composition comments All concentrations are in percent by weight unless otherwise indicated. Components not listed are either non-hazardous or are below reportable limits.

4. First-aid measures

Inhalation Move to fresh air. Seek medical advice.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention or advice.

Ingestion Rinse mouth. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. Seek medical advice.

Most important symptoms/effects, acute and delayed May cause an allergic skin reaction. Dermatitis. Rash. May cause eye, skin and respiratory tract irritation.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information The toxicological properties of this material have not been fully investigated. If exposed or concerned, get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed. Combustion products may include: carbon oxides, nitrogen oxides, hydrogen cyanide, organic cyanides, acrylates.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk. Dike fire control water for later disposal. Avoid discharge into drains, water courses or onto the ground.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards In case of fire, toxic and irritating gases may be formed.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Retain and dispose of contaminated wash water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Avoid breathing mist or vapor. Provide adequate ventilation. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
Trimethylolpropane triacrylate (CAS 15625-89-5)	TWA	1 mg/m ³

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

Exposure guidelines

US WEEL Guides: Skin designation

Trimethylolpropane triacrylate (CAS 15625-89-5) Can be absorbed through the skin.

Appropriate engineering controls Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear approved chemical safety goggles. Risk of splashes: Face shield is recommended.

Skin protection

Hand protection Wear chemical-resistant, impervious gloves. Suitable gloves can be recommended by the glove supplier.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. Wear NIOSH approved respirator appropriate for airborne exposure at the point of use. Appropriate respirator selection should be made by a qualified professional. Recommended use: Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color Not available.

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Mist or vapor may irritate the respiratory system.
Skin contact	May cause an allergic skin reaction.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics May cause an allergic skin reaction. Dermatitis. Rash. May cause eye, skin and respiratory tract irritation.

Information on toxicological effects

Acute toxicity	>90% of the mixture consists of component(s) of unknown acute toxicity.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	May cause an allergic skin reaction.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Trimethylolpropane triacrylate (CAS 15625-89-5) 2B Possibly carcinogenic to humans.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged exposure may cause chronic effects.
Further information	>90% of the mixture consists of component(s) of unknown acute toxicity. This product contains a substance which has not yet been fully tested. May be absorbed through the skin in harmful amounts.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available for this product.
Mobility in soil	No data available.
Other adverse effects	>90% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Based on the very high viscosity and very low vapor pressure, inhalation exposure to this substance is not expected. During its evaluation of a new Urethane methacrylate, EPA identified the following hazards as a potential concern based on structural analogs: skin corrosion, skin irritation, eye irritation, respiratory irritation, respiratory sensitization, and skin sensitization. If the substance is handled at elevated temperature, is sprayed or aerosolized, or other circumstances in which inhalation exposure is reasonably likely during manufacture of the neat substance, a NIOSH approved respirator with an APF 50 should be worn. If during formulation or other processing, the substance is handled at elevated temperature, is sprayed or aerosolized, or other circumstances in which inhalation exposure is reasonably likely a NIOSH approved respirator with an APF 10 should be worn. Other substances present may warrant the use of a NIOSH approved respirator with an APF 10 or greater. The APF required should be determined based on other hazards that may be present. Residual levels of monomer raw materials after manufacture is <0.1%.

This product contains one or more substances subject to export notification requirements under TSCA Section 12(b) (40 CFR Part 707 Subpart D). Contact the manufacturer (see section 1) for relevant reporting information.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Toxic Substances Control Act (TSCA)

One or more components of the mixture are not on the TSCA 8(b) inventory or are designated "inactive".

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Not listed.

SARA 311/312 Hazardous chemical Yes**Classified hazard categories** Respiratory or skin sensitization
Reproductive toxicity**SARA 313 (TRI reporting)**

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

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

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.**US state regulations****US. Massachusetts RTK - Substance List**

Not regulated.

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

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

Not regulated.

California Proposition 65**WARNING:** This product can expose you to chemicals including Methyloxirane, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.**California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Methyloxirane (CAS 75-56-9)

Listed: October 1, 1988

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Trimethylolpropane triacrylate (CAS 15625-89-5)

International Inventories


Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

Issue date	07-January-2019
Revision date	20-September-2019
Version #	03
Further information	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
HMIS® ratings	Health: 2 Flammability: 1 Physical hazard: 0
NFPA ratings	

Disclaimer Carbon, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.