

Material Safety Data Sheet

Material Name: VeroWhite FULLCURE 830

ID: FC-830

*** Section 1 - Chemical Product and Company Identification ***

Product Use: Toner

Manufacturer Information

Objet Geometries Ltd.
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P.O. Box 2496, Rehovot 76124
Israel

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*** Section 2 - Hazards Identification ***

Emergency Overview

This product is considered to be an article according to 29 CFR 1910.1200 (OSHA Hazard Communication Standard). While no specific safety information is required for articles, this Material Safety Data Sheet is provided for informational purposes.

As manufactured and supplied, the Objet toner cartridge is not hazardous under normal conditions of use. While unlikely, uncured resin may leak from damaged toner cartridges and cause eye or skin irritation.

Potential Health Effects: Eyes

Uncured resin is expected to be irritating to the eyes. Uncured resin may polymerize and adhere to eye tissue.

Potential Health Effects: Skin

Uncured resin is irritating to the skin. Uncured resin may polymerize and adhere to skin. Uncured resin may cause an allergic response in sensitized individuals.

Potential Health Effects: Ingestion

Ingestion is not a likely exposure route. Uncured resin is expected to be irritating to the digestive tract. Ingestion of large quantities is likely to cause nausea and vomiting.

Potential Health Effects: Inhalation

Inhalation is not a likely exposure route. Inhalation expected to cause respiratory tract irritation, nausea, and headache.

HMIS Ratings: Health: 1 Fire: 1 Physical Hazard: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

*** Section 3 - Composition / Information on Ingredients ***

CAS #	Component	Percent
Not Available	Acrylic oligomers	30-50
Proprietary	Monomer	10-30
5888-33-5	2-Propenoic acid, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-	10-30
87320-05-6	[2-[1,1-dimethyl-2[(1-oxoallyl)oxy]ethyl]-5-ethyl-1,3-dioxan-5yl]methyl acrylate	0-10
154608-99-8	Epoxy acrylic oligomer	1-10
Proprietary	Photoinitiator	1 - 5

Component Information/Information on Non-Hazardous Components

No additional information is available.

*** Section 4 - First Aid Measures ***

First Aid: Eyes

Flush eyes immediately with water for at least 15 minutes. Seek medical attention if irritation develops or persists. If product polymerizes and adheres to eye tissue, DO NOT attempt to remove. Get immediate medical attention.

First Aid: Skin

If exposed to resin, remove contaminated clothing. Immediately wash affected area with soap and water, and seek medical attention if irritation develops or persists. If product polymerizes and adheres to skin, DO NOT attempt to remove. Get immediate medical attention.

First Aid: Ingestion

If ingested, seek immediate medical advice. DO NOT INDUCE VOMITING!

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First Aid: Inhalation

Remove source of contamination or move affected person to fresh air. Seek medical advice if irritation develops or persists.

*** Section 5 - Fire Fighting Measures ***

General Fire Hazards

See Section 9 for Flammability Properties.

Combustible liquid III B.

Hazardous Combustion Products

Carbon dioxide, carbon monoxide, low molecular weight hydrocarbons, and nitrogen oxides.

Extinguishing Media

Water spray, foam, BC dry powder, carbon dioxide.

Unsuitable Extinguishing Media

None identified.

Specific Hazards Arising From the Chemical

None identified.

Fire Fighting Equipment/Instructions

Firefighters should wear full protective clothing including self contained breathing apparatus.

NFPA Ratings: Health: 1 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

*** Section 6 - Accidental Release Measures ***

Personal Precautions

Refer to Section 8 of this MSDS.

Containment Procedures

Intact cartridges do not pose a leak or spill hazard. Damaged cartridges may leak uncured resin. Stop the flow of material, if this is without risk.

Environmental Precautions

Prevent release to soil and water. Avoid release to sanitary sewer system (consult local authorities for advice).

Clean-Up Procedures

Use an inert absorbent to take up liquid resin. Transfer slurry to a suitable container for disposal. Wash contaminated surfaces with soap and water.

Evacuation Procedures

Not ordinarily required.

Special Procedures

Contact local regulatory authorities for advice regarding disposal of cleanup materials.

*** Section 7 - Handling and Storage ***

Handling Procedures

For damaged cartridges, prevent eye and skin exposure, and do not breath fumes or mists. Wash thoroughly after handling damaged cartridges.

Storage Procedures

Store in a cool (room temperature) dry area. Prevent exposure to sunlight.

*** Section 8 - Exposure Controls / Personal Protection ***

A: Component Exposure Limits

ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

Engineering Controls

Not ordinarily required.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Not ordinarily required. Chemical goggles or safety glasses with side shields should be worn when handling a damaged cartridge.

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Personal Protective Equipment: Skin

Not ordinarily required. Wear impervious gloves when handling damaged cartridge. Wash contaminated clothing before re-use.

Personal Protective Equipment: Respiratory

Not ordinarily required.

Personal Protective Equipment: General

Use good industrial hygiene practices when using this product.

*** Section 9 - Physical & Chemical Properties ***

Appearance:	Toner cartridge	Odor:	Mild acrylic
Physical State:	Article	pH:	NA
Vapor Pressure:	NA	Vapor Density:	NA
Boiling Point:	NA	Melting Point:	NA
Solubility (H2O):	Non soluble	Specific Gravity:	NA
Evaporation Rate:	NA	Octanol/H2O Coeff.:	NA
Flash Point:	> 212 °F (> 100 °C) (predicted)	Flammability Class:	IIIB Combustible Liquid
Auto Ignition:	NA		

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

Stable under normal conditions of use and storage.

Chemical Stability: Conditions to Avoid

Exposure to heat and light.

Incompatibility

Not applicable under normal conditions of use and storage.

Hazardous Decomposition

Combustion products include carbon dioxide, carbon monoxide, low molecular weight hydrocarbons, and nitrogen oxides.

Possibility of Hazardous Reactions

Uncured resin will polymerize on exposure to light or heat.

*** Section 11 - Toxicological Information ***

Acute Dose Effects

A: General Product Information

Under normal conditions of use, the likelihood of exposure to uncured resin is very small. Ingestion of large amounts of uncured resin may cause gastrointestinal irritation, with nausea and vomiting likely. Inhalation of large amounts of uncured resin (mist or fumes) may irritate the respiratory tract and cause headache and nausea.

B: Component Analysis - LD50/LC50

2-Propenoic acid, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo- (5888-33-5)

Oral LD50 Rat: 4890 mg/kg; Dermal LD50 Rabbit: >5 g/kg

Irritation

Contact with uncured resin is likely to irritate the eyes and may cause skin irritation. Uncured resin may polymerize, and adhere to tissue.

Carcinogenicity

A: General Product Information

No information available for product.

B: Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Sensitization

Uncured resin contains a skin sensitizer.

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*** Section 12 - Ecological Information ***

Ecotoxicity

A: General Product Information

No data available for product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

No ecotoxicity data are available for this product's components.

Persistence & Degradability

No information available for product.

Bioaccumulation & Accumulation

No information available for product.

Mobility in Environmental Media

No information available for product.

*** Section 13 - Disposal Considerations ***

US EPA Waste Number & Descriptions

Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions

Spent or damaged cartridges should be recycled if possible. Consult with Local, State, or Federal Regulatory agencies for advice regarding recycling or environmentally sound disposal of this product.

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

*** Section 14 - Transportation Information ***

US DOT Information

Shipping Name: Not regulated as a hazardous material for transportation.

*** Section 15 - Regulatory Information ***

US Federal Regulations

A: General Product Information

Components of this product have been checked against the non-confidential TSCA inventory by CAS Registry Number. Components not identified on this non-confidential inventory are either exempt from listing (i.e. polymers, hydrates) or are listed on the confidential inventory as declared by the supplier. All components listed in this product are either exempt from listing or appear on the Canadian DSL/NDSL.

B: Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

State Regulations

A: General Product Information

Other state regulations may apply. Check individual state requirements.

B: Component Analysis - State

None of this product's components are listed on the state lists from CA, MA, MN, NJ, PA, or RI.

Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

Additional Regulatory Information

A: General Product Information

No information available for the product.

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B: Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
2-Propenoic acid, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-	5888-33-5	Yes	DSL	EINECS
[2-[1,1-dimethyl-2[(1-oxoallyl)oxy]ethyl]-5-ethyl-1,3-dioxan-5yl]methyl acrylate	87320-05-6	Yes	NA	EINECS
Monomer	Proprietary	Yes	No	No
Epoxy acrylate	154608-99-8	Yes	NDSL	EINECS
Photoinitiator	Proprietary	Yes	DSL	EINECS

*** Section 16 - Other Information ***

Other Information

The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

MSDS History

New MSDS 29 March 2005

Updated Component in Section 3: Composition/Information on 30-09-2007

Updated Component in Section 15 B: Component Analysis on 30-09-2007

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; CAS = Chemical Abstracts Service; CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act; CFR = Code of Federal Regulations; CPR = Controlled Products Regulations; DOT = Department of Transportation; DSL = Domestic Substances List; EINECS = European Inventory of Existing Commercial Chemical Substances; EPA = Environmental Protection Agency; IARC = International Agency for Research on Cancer; IATA = International Air Transport Association; mg/Kg = milligrams per Kilogram; mg/L = milligrams per Liter; mg/m3 = milligrams per Cubic Meter; MSHA = Mine Safety and Health Administration; NA = Not Applicable or Not Available; NIOSH = National Institute for Occupational Safety and Health; NJTSR = New Jersey Trade Secret Registry; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit; TDG = Transport Dangerous Goods; TSCA = Toxic Substances Control Act; WHMIS = Workplace Hazardous Materials Information System.

This is the end of MSDS # FC-830