

Material Safety Data Sheet

Material Name: Optical Fiber with colored coating

ID: C-089

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

Product Name: Corning® Vascade® EX2000 fiber, Corning® Vascade® EX1000 fiber, Corning® Vascade® LEAF® fiber, Corning® Vascade® L1000 fiber, Corning® Vascade® LS+ fiber, Corning® Vascade® S1000 fiber, Corning® Vascade® R1000 fiber solution, Corning® Vascade® R2000 fiber solution, Corning® VistaCor® fiber, Corning® MetroCor® fiber, Corning® LEAF® fiber, Corning® SMF-28® ULL fiber, Corning® SMF-28e+® LL fiber, Corning® SMF-28e® photonic fiber, Corning® SMF-28e+® fiber, Corning® ClearCurve® ZBL fiber, Corning® ClearCurve® LBL fiber, Corning® ClearCurve® XB fiber, Corning® ClearCurve® OM2 fiber, Corning® ClearCurve® OM3 fiber, Corning® ClearCurve® OM4 fiber, Corning® InfiniCor® SX+ fiber, Corning® InfiniCor® SXi fiber, Corning® InfiniCor® eSX+ fiber, Corning® InfiniCor® 300 fiber, Corning® InfiniCor® CL™ 1000 fiber, Corning® 50/125 fiber, Corning® 62.5/125 fiber

Chemical Name: Glass core covered with a colored urethane acrylate polymer.

Product Use: Light transmission

Manufacturer Information

Corning Incorporated

Phone: (910) 784-7200

Wilmington Plant

310 N. College Road

Emergency # 24 Hr CHEMTREC U.S. (800) 424-9300

Wilmington, NC 28405

24 Hr CHEMTREC International (703) 527-3887

General Comments

NOTE: CHEMTREC telephone number is to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals.

***** Section 2 - Hazards Identification *****

Emergency Overview

This is a non-combustible, non-reactive solid material. It is supplied in the form of a glass filament in a polymer coating.

Exposure to glass powder or dusts may be irritating to eyes, nose, and throat. Use methods suitable to fight surrounding fire.

Combustion products can include irritating and toxic fumes and gases.

Hazard Statements

Dust or powder may be irritating to the eyes, skin, respiratory system and gastrointestinal tract.

Potential Health Effects: Eyes

Dust or powder may irritate eye tissue. Rubbing may cause abrasion of cornea. Symptoms can include redness and tearing.

Potential Health Effects: Skin

The cured polymer coating has been tested and found to be non-irritating to the skin. No components in this product have been found to be absorbed through the skin.

Potential Health Effects: Ingestion

May cause temporary irritation of the throat, stomach, and gastrointestinal tract.

Potential Health Effects: Inhalation

Dusts from the grinding of this product may cause irritation of the nose, throat, and respiratory tract. When inhaled in very large amounts, damage to the lung can occur.

HMIS Ratings: Health: 1 Fire: 0 Physical Hazard: 0 Pers. Prot.: gloves, goggles required only when cutting and splicing fiber

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

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

CAS #	Component	Percent
Not Available	Urethane Acrylate Polymer	<100
65997-17-3	Glass, oxide, chemicals	<100
Not Available	Ink	<1
3524-68-3	Pentaerythritol Triacrylate	<1

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Nuisance particulates.

Component Information/Information on Non-Hazardous Components

Optical Fiber consists of a thin glass filament in a polymer coating. The polymer coating has a thin outer coating of various colored inks. Glass is a solid material produced by combining various raw materials (e.g. oxides, carbonates, etc.), melting these components together, and cooling to a non-crystalline solid having its own unique properties.

Processing of this article may produce dusts or fumes which are considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

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

First Aid: Eyes

Eye injuries from glass fibers should be treated by a physician immediately.

First Aid: Skin

Abrasions from any cut or ground fibers should be treated promptly with thorough cleansing of the affected area. Seek medical attention for prompt removal of any particles that may be embedded under the skin.

First Aid: Ingestion

Seek medical attention if material is ingested.

First Aid: Inhalation

If inhaled, remove person to fresh air. If symptoms develop or persist, get medical attention.

First Aid: Notes to Physician

Sharp edges of glass may cause mechanical injury.

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

General Fire Hazards

See Section 9 for Flammability Properties.

Coating portion of this material may burn at elevated temperatures.

Hazardous Combustion Products

Carbon dioxide, carbon monoxide, various hydrocarbon fragments, phosphorus oxide, and possibly some carbon-containing fragments of the polymer coating.

Extinguishing Media

Use methods for the surrounding fire.

Fire Fighting Equipment/Instructions

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

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

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

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

Containment Procedures

None necessary.

Clean-Up Procedures

Wear appropriate protective equipment and clothing during clean-up. Collect spilled material using a vacuum cleaner with a HEPA filter. Place in a closed container.

Evacuation Procedures

None necessary.

Special Procedures

Spilled fibers tend to create a slipping hazard on hard surfaces.

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

Handling Procedures

Avoid inhalation/contact with dust.

Storage Procedures

Store in a dry area.

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

Exposure Guidelines

A: General Product Information

The OSHA (Vacated) air contaminants exposure limits (PELs) are those provided in the 1989 update to 29 CFR 1910.1000. These limits were vacated by OSHA and may not be enforceable.

B: Component Exposure Limits

Glass, oxide, chemicals (65997-17-3)

- ACGIH: 10 mg/m3 TWA (inhalable particles, recommended); 3 mg/m3 TWA (respirable particles, recommended) (related to Particulates (insoluble or poorly soluble) not otherwise specified (PNOS))
- OSHA (Final): 15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction) (related to Particulates not otherwise regulated)
- OSHA (Vacated): 15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction) (related to Particulates not otherwise regulated)
- Alberta: 10 mg/m3 TWA (total particulate); 3 mg/m3 TWA (respirable particulate) (related to Particulates not otherwise regulated)
- British Columbia: 10 mg/m3 TWA (total dust); 3 mg/m3 TWA (respirable fraction) (related to Particles (insoluble or poorly soluble) not otherwise specified)
- Manitoba: 10 mg/m3 TWA (inhalable particles, recommended); 3 mg/m3 TWA (respirable particles, recommended) (related to Particulates (insoluble or poorly soluble) not otherwise specified (PNOS))
- New Brunswick: 10 mg/m3 TWA (particulate matter containing no asbestos and < 1% crystalline silica, inhalable fraction); 3 mg/m3 TWA (particulate matter containing no asbestos and < 1% crystalline silica, respirable fraction) (related to Particulates not otherwise classified (PNOCC))
- NW Territories: 5 mg/m3 TWA (respirable mass); 10 mg/m3 TWA (total mass) (related to Nuisance particulate)
- Nova Scotia: 10 mg/m3 TWA (inhalable particles, recommended); 3 mg/m3 TWA (respirable particles, recommended) (related to Particulates (insoluble or poorly soluble) not otherwise specified (PNOS))
- Nunavut: 5 mg/m3 TWA (respirable mass); 10 mg/m3 TWA (total mass) (related to Nuisance particulate)

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- Ontario: 10 mg/m³ TWAEV (inhalable); 3 mg/m³ TWAEV (respirable) (related to Particles (insoluble or poorly soluble) Not Otherwise Specified (PNOS))
- Quebec: 10 mg/m³ TWAEV (total dust, containing no asbestos and less than 1% crystalline silica) (related to Particulates not otherwise classified (PNOC))
- Saskatchewan: 10 mg/m³ TWA; 3 mg/m³ TWA (respirable size) (related to Particulates, n.o.c.)
20 mg/m³ STEL; 6 mg/m³ STEL (respirable size) (related to Particulates, n.o.c.)

Engineering Controls

If material is ground, cut, or used in any operation which may generate small particles, use appropriate local exhaust ventilation.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear safety glasses with side shields or goggles.

Personal Protective Equipment: Skin

Wear leather or other appropriate work gloves, if necessary for type of operation. The use of coveralls is recommended.

Personal Protective Equipment: Respiratory

Not normally needed. If permissible levels are exceeded, use NIOSH approved dust respirator.

Personal Protective Equipment: General

Use good hygiene practices when handling this material including changing and laundering work clothing after use.

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

Appearance: Translucent white	Odor: Acrylate odor
Physical State: Solid	pH: Not applicable
Vapor Pressure: Not applicable	Vapor Density: Not applicable
Boiling Point: Not applicable	Melting Point: Not applicable
Solubility (H₂O): Not applicable	Specific Gravity: Not applicable
Softening Point: Not applicable	Molecular Weight: Not applicable
Auto Ignition: Not applicable	Flash Point: Not applicable
Flash Point Method: Not applicable	Lower Flammability Limit (LFL): Not applicable
Upper Flammability Limit (UFL): Not applicable	OSHA Flammability Classification: Not applicable

Physical Properties: Additional Information

None known.

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

Chemical Stability

Stable.

Chemical Stability: Conditions to Avoid

Keep away from heat and incompatible materials.

Incompatibility

Avoid contact with strong oxidizers, strong acids, and halogens.

Hazardous Decomposition

Carbon dioxide, carbon monoxide, various hydrocarbon fragments, phosphorus oxide, and possibly some carbon-containing fragments of the polymer coating.

Possibility of Hazardous Reactions

Will not occur.

***** Section 11 - Toxicological Information *****

Acute Dose Effects

A: General Product Information

The product contains a thin outer coating of colored ink in a urethane acrylate polymer. Under normal conditions of use the coating is inert. Dusts may cause mechanical irritation to eyes and skin. Ingestion may cause transient irritation of throat, stomach and gastrointestinal tract. Inhalation may cause coughing, nose and throat irritation, and sneezing. Higher exposures may cause difficulty breathing, congestion, and chest tightness.

B: Component Analysis - LD50/LC50

Pentaerythritol Triacrylate (3524-68-3)

Oral LD50 Rat: 2460 µL/kg; Dermal LD50 Rabbit: 4 mL/kg

Epidemiology

No information available.

Carcinogenicity

A: General Product Information

No additional information.

B: Component Carcinogenicity

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

Mutagenicity

No information available.

Teratogenicity

No information available.

Neurological Effects

No additional information.

Other Toxicological Information

Under normal conditions of use for this product, the likelihood of inhaling or ingesting amounts necessary for adverse effects to occur is very small.

***** Section 12 - Ecological Information *****

Ecotoxicity

A: General Product Information

No information available for product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

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

Environmental Fate

No information available for product.

***** Section 13 - Disposal Considerations *****

US EPA Waste Number & Descriptions

A: General Product Information

You must test your waste using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

B: Component Waste Numbers

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

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Disposal Instructions

Waste must be handled in accordance with all applicable regulations. Purchaser is advised to review regulations referenced for applicability as determined by purchaser's use of the product. Glass products may be recycled. See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

*** Section 14 - Transportation Information ***

International Transportation Regulations

This product is not regulated as a hazardous material by the United States DOT or Canadian TDG.

US DOT Information

Shipping Name: Not regulated

UN/NA #: Not applicable **Hazard Class:** Not applicable **Packing Group:** None

Required Label(s): None

Additional Info.: None

*** Section 15 - Regulatory Information ***

US Federal Regulations

A: General Product Information

No additional information.

B: Component Analysis

None of this product's 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

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Glass, oxide, chemicals (related to Nuisance particulates)	65997-17-3	No	No	Yes	No	No	Yes 1
Pentaerythritol Triacrylate	3524-68-3	No	No	Yes	No	No	No

Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

Additional Regulatory Information

A: General Product Information

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

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B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Glass, oxide, chemicals	65997-17-3	Yes	Yes	Yes
Pentaerythritol Triacrylate	3524-68-3	Yes	Yes	Yes

*** Section 16 - Other Information ***

Other Information

Reasonable care has been taken in the preparation of this information, but Corning makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. Corning makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.

MSDS History

Revision 8.0007, 20-MAY-2009: Name update.
 Revision 8.0006, 08-DEC-2008: Name update.
 Revision 8.0005, 19-NOV-2008: Name update.
 Revision 8.0004, 05-NOV-2008: Name update.
 Revision 8.0003, 03-JUN-2008: Name update.
 Revision 8.0002, 14-MAR-2008: Name update.
 Revision 8.0001, 07-DEC-2007: Phone number, administrative changes.
 Revision 8.0000, 26-MAY-2006: Regulatory update, Product names updated.
 Revision 7.0000, 26-SEP-2005: Regulatory update/Converted to ANSI Z400.1-2004.
 Revision 6.0000, 01-JUN-2004: Administrative update.
 Revision 5.0000, 02-JAN-2004: Consolidation with related optical fiber MSDS sheets. Sections 1,2,5,6,7,8,10,11,15 revised.
 Revision 4.0000, 27-AUG-2002: Regulatory/reformulation revision.
 Revision 3.0000, 02-MAR-1999: Regulatory update.
 Revision 2.0000, 26-SEP-1998: Regulatory and literature review.
 Revision 1.0000, 14-MAR-1995: New MSDS.

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act. CFR = Code of Federal Regulations. DSL = Canadian Domestic Substance List. EINECS = European Inventory of New and Existing Chemical Substances. EPA = Environmental Protection Agency. HEPA = High Efficiency Particulate Air. HMIS = Hazardous Material Identification System. IARC = International Agency for Research on Cancer. NFPA = National Fire Protection Association. NIOSH = National Institute of Occupational Safety and Health. NJTSR = New Jersey Trade Secret Registry. NTP = National Toxicology Program. OSHA = Occupational Safety and Health Administration. NA = Not available or Not Applicable. SARA = Superfund Amendments and Reauthorization Act. TLV = Threshold Limit Value. TSCA = Toxic Substance Control Act. WHMIS = Workplace Hazardous Materials Information System.

NOTE: Corning is a registered trademark of Corning Incorporated, Corning, N.Y.

End of Sheet C-089