

## 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® EX3000 fiber, 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® G.652.D (SC) fiber, Corning® G.657.A1 (SC) fiber, Corning® ClearCurve® OM2 fiber, Corning® ClearCurve® OM3 fiber, Corning® ClearCurve® OM4 fiber, Corning® InfiniCor® SX+ fiber, Corning® InfiniCor® SX.i fiber, Corning® InfiniCor® eSX+ fiber, Corning® InfiniCor® 300 fiber, Corning® InfiniCor® CL™ 1000 fiber, Corning® 50/125 fiber, Corning® 62.5/125 fiber, Corning® ClearCurve® VSDN® optical fiber, Corning® SMF-28® Ultra fiber, Corning® ClearCurve® 200 fiber, Corning® ClearCurve® LX multimode fiber, Corning® SMF-28® Ultra 200 fiber

**Chemical Name:** Glass core covered with a colored UV-curable polymer.

**Product Use:** Light transmission

**Manufacturer Information**

Corning Incorporated  
One Riverfront Plaza  
Corning, NY 14831

Phone: (607) 248-2000

Emergency # 24 Hr CHEMTREC U.S. (800) 424-9300  
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
65997-17-3	Glass, oxide, chemicals	<100
Not Available	UV-Curable Polymer	<100
3524-68-3	Pentaerythritol Triacrylate	<1
Not Available	Ink	<1

**Component Related Regulatory Information**

This product may be regulated and have exposure limits as identified in Section 8.

**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 (HazardCommunication).

## \*\*\* 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**

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.

**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 Nuisance particulates)
- OSHA (Final):** 15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction, related to Nuisance particulates)
- OSHA (Vacated):** 15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction, related to Nuisance particulates)
- Alberta:** 10 mg/m3 TWA (total); 3 mg/m3 TWA (respirable, related to Nuisance particulates)
- British Columbia:** 10 mg/m3 TWA (total dust); 3 mg/m3 TWA (respirable fraction, related to Nuisance particulates)
- Manitoba:** 10 mg/m3 TWA (inhalable particles, recommended); 3 mg/m3 TWA (respirable particles, recommended, related to Nuisance particulates)
- 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 Nuisance particulates)
- NW Territories:** 5 mg/m3 TWA (respirable mass); 10 mg/m3 TWA (total mass, related to Nuisance particulates)
- Nova Scotia:** 10 mg/m3 TWA (inhalable particles, recommended); 3 mg/m3 TWA (respirable particles, recommended, related to Nuisance particulates)
- Nunavut:** 5 mg/m3 TWA (respirable mass); 10 mg/m3 TWA (total mass, related to Nuisance particulates)
- Ontario:** 10 mg/m3 TWA (inhalable particulate); 3 mg/m3 TWA (respirable particulate, related to Nuisance particulates)

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**Quebec:** 10 mg/m3 TWA<sub>EV</sub> (total dust, containing no asbestos and less than 1% crystalline silica, related to Nuisance particulates)

**Saskatchewan:** 10 mg/m3 TWA (inhalable fraction); 3 mg/m3 TWA (respirable fraction, related to Nuisance particulates)  
20 mg/m3 STEL (inhalable fraction); 6 mg/m3 STEL (respirable fraction, related to Nuisance particulates)

### 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 \*\*\*

<b>Appearance:</b>	Translucent white	<b>Odor:</b>	Acrylate odor
<b>Physical State:</b>	Solid	<b>pH:</b>	Not applicable
<b>Vapor Pressure:</b>	Not applicable	<b>Vapor Density:</b>	Not applicable
<b>Boiling Point:</b>	Not applicable	<b>Melting Point:</b>	Not applicable
<b>Solubility (H<sub>2</sub>O):</b>	Not applicable	<b>Specific Gravity:</b>	Not applicable
<b>Softening Point:</b>	Not applicable	<b>Molecular Weight:</b>	Not applicable
<b>Auto Ignition:</b>	Not applicable	<b>Flash Point:</b>	Not applicable
<b>Flash Point Method:</b>	Not applicable	<b>Lower Flammability Limit (LFL):</b>	Not applicable
<b>Upper Flammability Limit (UFL):</b>	Not applicable	<b>OSHA Flammability Classification:</b>	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.

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## \*\*\* Section 11 - Toxicological Information \*\*\*

**Acute Dose Effects**

The product contains a thin outer coating of colored ink in a UV-curable 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.

**Component Analysis - LD50/LC50****Pentaerythritol Triacrylate (3524-68-3)**

Oral LD50 Rat 1830 mg/kg; Dermal LD50 Rabbit 4 mL/kg

**Epidemiology**

No information available.

**Carcinogenicity**

No additional information.

**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**

No information available for product.

**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**

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

**Component Waste Numbers**

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

**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.

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### \*\*\* 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

No additional information.

#### 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).

#### SARA 311/312

**Acute Health:** No **Chronic Health:** No **Fire:** No **Pressure:** No **Reactive:** No

#### State Regulations

Other state regulations may apply. Check individual state requirements.

#### 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 <sup>1</sup>
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

RoHS (2002/95/EC and 2011/65/EC) and WEEE (2002/96/EC and 2012/19/EU) Compliance Statement:

This product does not contain lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated biphenyl ethers (includes decabromodiphenyl ethers) in excess of 0.1% (by weight), or cadmium in excess of 0.01% (by weight).

REACH (1907/2006/EC) Compliance Statement: Notification of presence of substances of concern: It is possible for ethoxylated 4-Nonylphenol (NPEO), branched and linear, to be present in the coating of the fiber in excess of 0.1% (by weight).

#### 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.

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### MSDS History

Revision 8.0011, 25-NOV-2013: Administrative update, RoHS statement update  
Revision 8.0010, 18-SEPT-2013: Administrative update, Product name update  
Revision 8.0009, 23-MAR-2011: Name update.  
Revision 8.0008, 07-SEP-2010: Name update.  
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.

Questions regarding information found in this document should be directed to the address and phone number shown in Section 1.

If additional information is needed contact:

Corning, Incorporated.

Safety Management Services

MP-HQ-01-E1H22A

Corning, NY 14831

Tel. No. (607)-974-6926 or (607)-974-8002

### 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