

SAFETY DATA SHEET – OPTICAL FIBER

(NON-MANDATORY, FOR INDICATION ONLY)

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1.0 Product description

Single-mode/ Multimode Optical Glass (silica) Fiber wound onto plastic spool

1.2 Manufacturer

Fiber manufacturer
 Fibercore Limited
 University Parkway
 Southampton Science Park
 Chilworth
 Hampshire
 SO16 7QQ
 Tel: +44 (0)2380 769893

Contact: sales@fibercore.com if there are further questions relating to this document

Spool manufacturer
 Sonoco Plastics B.V.
 Veilingweg 24
 NL-2651 BE Berkel en Rodenrijs
 The Netherlands
 Tel: +31110-4554344

2.0 Hazard identification

Optical fiber is not a dangerous substance in relation to EU-directive 2001/58/EC.
 The use and processing of optical fibers does not pose significant risks.
 Optical fiber is an article, according to the REACH definition.

Some precaution may be needed when handling and processing optical fibers, see 4.0

3.0 Composition and description

3.1 Fiber and fiber spool composition (fiber composition indicative and correct for majority of types). Any variations are in core composition and will not materially impact the validity of this material safety data sheet)

COMPONENT	COMPOUND	AMOUNT (BY PERCENTAGE)	CAS NO.
Glass fiber strand	Amorphous silica	40	61790-53-2
Glass fiber strand	Germanium	< 5	7440-56-4
Glass fiber strand	Acrylate coating	60	Available on request
Packaging (spool)			
ABS spool			9003-56-9
Foam belly	Polyurethane foam		9009-54-5
Cling film plastic	Polyvinyl chloride		Not available
Paper labels			Not available

3.2 Description

An optical fiber is a thin quartz glass fiber with an acrylate coating.

For transport, storage and use the fiber is wound on a plastic ABS spool with a soft underlayer foam. For dust protection, the fiber package has a domestic opaque plastic 'cling film' wrap. The spool has a label attached to it.

4.0 First-aid precautions

4.1 Contact with eyes

Small glass splinters may cause irritation. This is a general reaction caused by the shape of splinter not by the material properties.

Flush open eye(s) with water from an eye wash bottle or similar. Consult eye specialist, if required.

4.2 Contact with skin

In exceptional cases the human skin may be slightly irritated when coming into contact with the acrylate coating. Close fitting 'surgical' type gloves will avoid this potential problem. Remove glass splinters from stab wounds. Consult physician, if required.

4.3 Ingestion

Glass splinters may irritate the digestive system, although usually briefly.

This is a general reaction caused by the shape of splinter not by the material properties.

When in doubt, consult a physician.

Glass splinters may irritate nose, throat and lungs. This is a general reaction caused by the shape of splinters not by the material properties. During regular use and processing of the optical fibers inhalation is very unlikely.

Consult lung specialist when large quantities have been inhaled.

4.4 Processing

It is advisable not to eat or drink at the location where optical fiber processing is taking place.

5.0 Fire precautions

Both acrylate coating and ABS spools are combustible at high temperatures.

5.1 Extinguishing media

Suitable fire extinguishing media are water, water-based foam, carbon dioxide and powder. The choice depends on the environment where the fire is.

5.2 Special hazards arising from the material

The combustion of acrylate coating generates toxic byproducts, carbon dioxide, carbon monoxide, water and decomposition products (monomers/hydrocarbons).

The burning of the spool results in the formation of monomers and hydrocarbons, hydrogen cyanide, carbon dioxide, carbon monoxide and water.

5.3 Advice for firefighters

Full personal protection RPE using compressed-air respiration systems.

6.0 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

During removal of optical fiber residues or waste it is recommended to protect hands

against puncture injuries using appropriate gloves, and to protect eyes using safety glasses with side shields.

6.2 Environmental precautions / methods for clean up

Collecting loose optical fiber, residue, coating particles etc is best achieved using a vacuum cleaner with a filter to control the particulate level in the expelled air.

7.0 Handling and storage

7.1 Precautions for safe handling

For fiber operations it is advisable to protect the eyes using safety goggles with side shields. If necessary close fitting 'surgical' type gloves can be worn.

7.2 Conditions for safe storage

Store optical fibers in a clean, dry environment. Avoid excessive temperature extremes or high levels of humidity.

8.0 Exposure controls / personal protection

8.1 Potential hazards

Cured acrylate coating: there is a very small risk of sensitisation but this is very rare, otherwise there are no known hazards

Quartz fiber: Potential for stick injuries due to small diameter and degree of rigidity, otherwise no known hazards

Spool: no known hazards

8.2 Exposure controls

Eyes: Safety glasses or goggles with side shields

Skin: Wearing close fitting 'surgical' gloves is recommended

9.0 Physical and chemical properties

Information on basic physical and chemical properties

Outward appearance: Fiber color: Colourless and transparent, some may appear with a slight yellow colouration

Smell: Light acrylate smell

Melting point: not applicable

Boiling point: not applicable

Ignition point: not known

Vapor pressure: not known/not applicable

Density: Glass: about 2.2 g/cm³

Acrylate coating: about 0.9 - 1.2 g/cm³

Spool: approximately 1 g/cm³

Solubility: Insoluble in water

p-value: not applicable

Viscosity: not applicable

10.0 Stability and reactivity

Both optical fiber, acrylate coating and the spool are inert / non-reactive and stable under general conditions storage and processing temperatures.

Precautions against fire are described in 5.0

11.0 Toxicological information

LD50/LC50: unknown

Both the acrylate coating and spool are not carcinogenic according to suppliers' specifications.

12.0 Ecological information

Since both optical fiber and reel are stable and insoluble in water, they are non-hazardous to the ecological system.

13.0 Disposal considerations

Since they are stable and insoluble in water, it is permissible to discharge both optical fiber and reel on any dumping site on land, or to deliver them to waste incinerators without any danger arising. The reels can be recycled wholly or as loose material.

14.0 Transport information

14.1 Means of transport

All means of transport are permissible.

Optical glass fiber is regulated as non-hazardous in transport.

14.2 Transport conditions

Transport optical fiber in a dry and dustproof environment. Do not expose reels with optical fibers to heavy impacts

15.0 Regulatory information

Since optical fibers and reels are non-hazardous, labelling and danger classification are not required or applicable.

16.0 Other information

Optical fiber and spools are not classified as dangerous substances in relation to EU-directive 2001/58/EG.

As a result there is no obligation to make or distribute a material safety datasheet.

This datasheet is based on the directive EU-directive 2001/58/EG annex "Guide to the compilation of safety data sheets".

Optical fiber is an article, according to the REACH definition. Optical fiber contains no substance that is intended to be released during normal and reasonably foreseeable conditions of use.

Fibercore products are fully compliant with REACH regulations. A REACH statement is available on the website: www.fibercore.com or may be requested.

Fibercore products are fully compliant with RoHS regulations. An RoHS statement is available on the website: www.fibercore.com or may be requested

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