

Materials for Optical Communications Components

Adhesives, Coatings, Sealants, Potting and Encapsulations Materials

MY Polymers offers a wide range of materials for Optical Communications and networking. We continuously adapt our products to the fast changing requirements of the Optical Communications industry. Our products can be found in EDFA optical amplifiers, in Optical Transceivers, PLC Splitters, V-Groove Arrays, and Integrated Photonic Circuits.

The Dual Cure (UV or Heat or Both) DC Product Line

Our Dual Cure (DC) products find a growing number of applications as adhesives, coatings and sealants. All our Dual Cure materials are one component materials. They are cured by either UV radiation, Heat, or a combination of both. This feature enables curing in partially or fully shaded regions of the device. The DC line includes both flexible and rigid products with a refractive index from 1.33 to 1.50, with relatively big selection close to the index of silica. These include DC-1455 (flexible, index=1.448 at 950 nm) and DC-1455-HM and (Rigid, index=1.451) The DC line also includes high bond strength products like DC-150 (flexible) and DC-1473 (rigid).

The table below includes some of the members of the DC product line. To see the full updated table, go to the Dual Cured Products Category, in the Products page in our website.

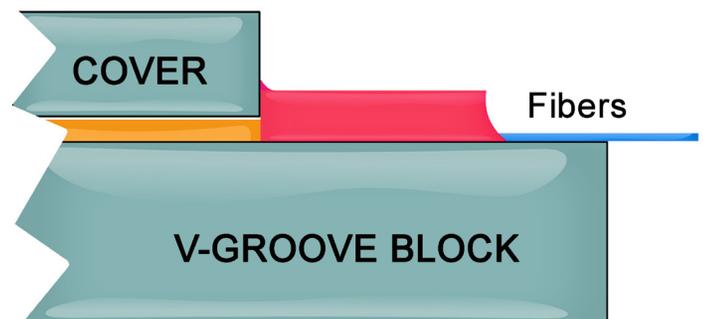
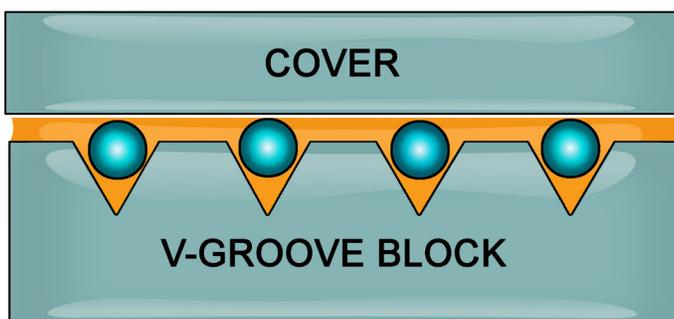
Product	RI @ 950nm	Adhesion g/cm	Elastic Mod. MPa	Viscosity CPS
DC-133	1.330	5	3	2200
DC-136	1.366	180	9	600
DC-136-EA	1.363	190	15	1700
DC-140	1.402	270	420	4200
DC-145	1.449	1200	30	1900
DC-1455	1.449	1600	32	1700
DC-150	1.478	>1000	23	1800
DC-1455-HM	1.452	600	400	250
DC-1473-HM	1.470	1700	555	290



Typical applications include:

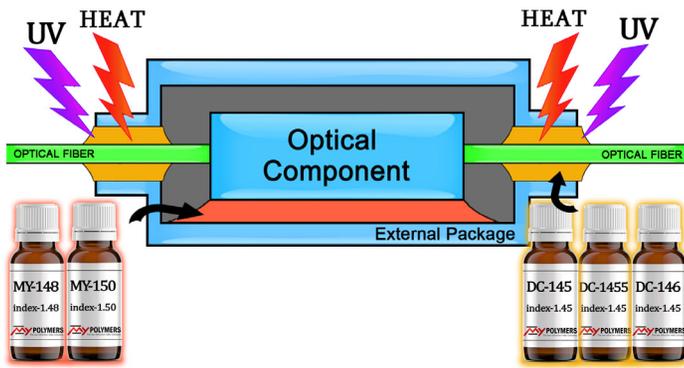
V-Groove Array: Bonding & cladding the fibers inside the V-Grooves, fixing the fibers externally

For bonding inside the V-grooves array, if a low index is preferred, customers can use DC-136-EA, if not customers can use DC-1455 or DC-150. If a rigid adhesive is preferred, use DC-1455-HM or DC-1473-HM. For fixing the input/output fibers use the versatile DC-150, (or the UV cured MY-150). And for rigid fixing, use DC-1455. DC-1475. (or the UV cured MY-1473.)



Sealant for an Optical Component Package

The entry points of an optical fiber into the external package of a component can be sealed using one of our Dual Cured products, such as DC-1455 (when important to keep the index just below that of the silica fiber core) or DC-150. Both are very flexible, and this reduces the stress during thermal cycling or after a thermal shock. This enables the higher reliability of the device. The Dual Curing feature can be used for an initial fixing of the external side of the seal. Afterward, heat curing is used to cure the hidden part of the seal.

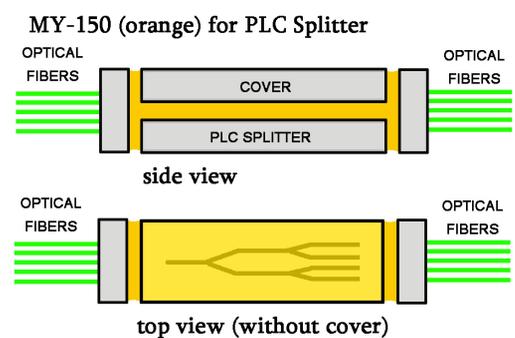


Other Products

In addition, MY Polymers has a wide selection of UV cured products, Moisture Cured Coatings and high bond strength low index lamination adhesives.

Some relevant UV cured products include MY-130, MY-133-V2000, RCT-136, MY-136, MY-140, LM-145, MY-1455, MY-150, and many more. The UV cured products have a shelf life advantage over the DC products. The UV cured products are the largest group of products we have, with many different properties, such as refractive index, adhesion, modulus, etc.

Product	RI @ 950nm	Adhesion g/cm	Elastic Mod. MPa	Viscosity CPS
MY-130	1.303	low	<1	120
MY-132-A	1.320	3	2.5	200
MY-133-V2000	1.329	9	5.2	2900
MY-136	1.360	110	20	750
RCT-136	1.363	190	15	1700
MY-140	1.401	270	420	4200
LM-142-NI	1.417	1000	28	3200
LM-1455	1.448	1600	32	1700
MY-150	1.477	>1100	23	1800
MY-133-MC	1.325	na	na	500
AR-139	1.391	150	Pencil 2H	100
LOCA-133	1.332	700	na	2000



Typical applications:

Primary fixing of the fibers onto a V-Groove Array (not inside the grooves): Use MY-150 for a flexible solution, or MY-1473 for a rigid one (see a picture in the previous page).

Cladding and encapsulation of photonic wire bonds:

Use MY-136 or LM-136-EA for cladding and encapsulation of the wire bond in an integrated photonic circuit. The relatively low index of 1.36 will minimize light leakage – especially at the sharp bending locations.

Anti-Reflective Coating:

Use the Moisture Cured AR-139 (index=1.39) if you need a combination of low index and good hardness (pencil hardness = 2H). If you need a lower index, and if you can compromise on lower hardness, use MY-133-MC (index=1.33).

About MY Polymers Ltd.

Distinguished by its total focus on low refractive index materials, MY Polymers is a leader in this field.

MY Polymers has been active in the field of Low Refractive Index Optical Coatings, Adhesives and Polymers since 2004. The company develops, produces, and sells primary coatings for optical fibers, recoating materials, optical adhesives, bio-photonic materials, anti-reflective coatings, and various other low index polymers, coatings and adhesives.

MY Polymers is ISO certified. We serve the global Photonics and Electronic Display industries, with customers in North America, Asia and Europe.