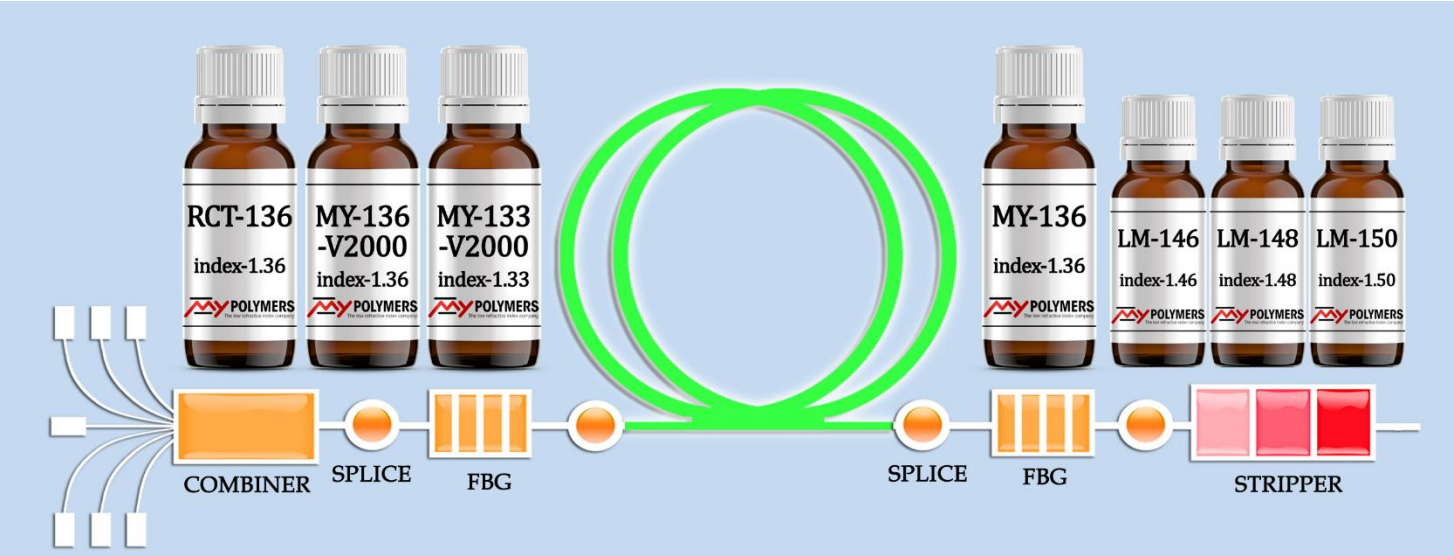
MY POLYMERS
The low refractive index company

Recoating Materials for Fiber Lasers

Dedicated Recoating Materials are optimized for the specific requirements of recoating.

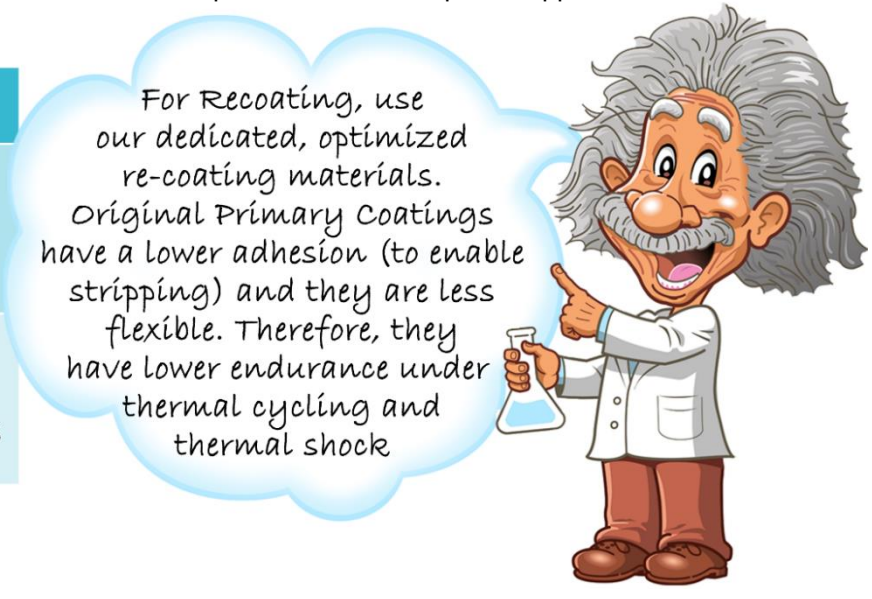
MY Polymers has a wide range of dedicated recoating materials. Dedicated recoating materials enable higher reliability, compared to the old practice of using Primary Coatings for recoating.
There are contradicting requirements between Recoating Materials and Primary Coatings (see comparison table below). Our materials have been optimized for Recoating, and they are replacing Primary Coatings in most recoating applications.
Some typical recoating applications are shown in the drawing below which shows a typical block diagram for a fiber laser. Recoating is required for the splices, for pump power combiner, for FBG components, couplers, etc.
For Cladding Power Strippers (CPS), customers select the higher index, Low Modulus (High Flexibility) LM-14X. A growing number of customers are adopting the Cascaded CPS design, using a cascade of recoating segments with a gradually higher index. This structure enables a gradual dissipation of heat, resulting in dramatically improved reliability.



Dedicated Recoating Materials are optimized for the Recoating task.

In the past, the original primary coating was used as a recoating material. However, there are major differences and contradictions between the requirements from these materials.
Due to these contradictions (see table) manufacturers of fiber lasers, optical amplifiers, and fiber-optic components are switching to the new Dedicated Recoating Materials, which were optimized for these specific applications.

PROPERTY	RECOATING MATERIAL	PRIMARY COATING
ADHESION	HIGHEST, FOR RELIABILITY	LIMITED, FOR STRIPPING
FLEXIBILITY	HIGHEST, FOR THERMAL ENDURANCE	LIMITED, FOR ROBUSTNESS



The new WT line for very WET conditions

In wet environments, our new WT recoating materials demnostrates the highest adhesion endurance under wet conditions. This product line has the same advantgaes of the LM product line, plus the increased adhesion under wet conditions. However, the improved adhesion under wet conditions comes at a price: The WT products are more sensitive in the uncured state, and their shelf life is limited to 6 months, compared to 12 months for the LM products.

Notable members of this new family include WT-142 (RI 1.42), WT-143 (RI 1.43) and WT-1455 (RI 1.455, same as silica).

The leading Recoating Materials with an index of 1.36

These materials are intended for recoating pump power combiners, splices, FBG, couplers, etc. The following table includes the major properties of the leading products in this category. Leading Recoating materials with matching 1.36 index include RCT-136, MY-136, and MY-136-V2000. These products have High Flexibility, Strong Adhesion, and break-through performance under thermal cycling, thermal shock and heat-damp testing.

Product	RI @ 950nm	Adhesion g/cm	Elastic Mod. MPa	Viscosity CPS	Tensile MPa	Elong. @ Break %	Shelf Life, months
RCT-136	1.363	150	43	1700	5.4	56	9
MY-136	1.360	110	20	750	4.7	45	12
MY-136-V2000	1.363	50	53	1700	6.0	50	12
LM-136-EA	1.363	225	17	1700	4.0	80	9

Recoating materials with the lowest index

Some customers use lower index recoating materials with an index of 1.33 or 1.32. Some popular materials are shown in the following table:

Product	RI @ 950nm	Adhesion g/cm	Elastic Mod. MPa	Viscosity CPS	Tensile MPa	Elong. @ Break %	Shelf Life, months
MY-133-V2000	1.329	9	5.2	2900	2.4	60	12
MY-133-EA	1.333	27	3.6	2300	1.0	45	6
MY-132-A	1.322	7	0.4	2600	0.3	80	12

The Low Modulus LM products for Recoating of Cladding Power Strippers

A different, specialized application is recoating of cladding light strippers. The new trend of using Cascaded strippers requires a set of materials with different refractive index. The combination of High Flexibility and high bond strength, provides a dramatic improvement in reliability. under thermal cycling and thermal shock. The following table summarizes the important properties of some common products used for this application.

Product	RI @ 950nm	Adhesion g/cm	Elastic Mod. MPa	Viscosity CPS	Tensile MPa	Elong. @ Break %	Shelf Life, months
LM-146	1.452	1900	35	1400	7	160	12
LM-148	1.472	500	42	1300	6.7	160	12
LM-150	1.477	1600	23	1800	4	450	12

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, 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.*

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