

Anti-Reflective and Moisture Cured Optical Coatings

Our Moisture Cured coatings cure spontaneously by absorbing moisture from the air. The moisture curing feature makes these products especially useful as coatings for surfaces. Since there is no UV curing (and no need for an inert atmosphere) it is simple to coat large surfaces, as well as complex geometries (geometries that would not allow UV curing due to blocking of UV radiation).

Our Moisture Cured coatings include 2 groups of products:



The MY-131/2/3 -MC products:

These moisture cured products have very low index of 1.31, 1.32, 1.33 and 1.36. Their abrasion resistance is relatively low. They are selected where the low index gives a special benefit. For example, MY-133-MC is used in the production of SPR biosensors, that requires a coating with an index of 1.33 (the RI of water, and cell tissues is also 1.33). In this application, the MY-133-MC is coated over the surface of a glass wafer, using spin coating.

The AR products (AR-138, AR-139, AR-141):

The AR products are hard anti-reflective coatings, with refractive index of 1.38 – 1.41. These products are liquid repelling, allowing easy removal of grease, various oils, solvents and water. The AR coatings are Moisture Cured. They are supplied as 60% solids solution. With pencil hardness of 2H – 1H, these coatings provide good abrasion resistance.

| # | Material Name | RI @ 589 nm | RI @ 950 nm | Cure | Adhesion gr/cm | Elastic Modulus MPa | Viscosity CPS | Tensile Strength MPa | Elongation At Break % | Hardness Shore | Shelf Life Months |
|---|---------------|-------------|-------------|------|----------------|---------------------|---------------|----------------------|-----------------------|----------------|-------------------|
| 1 | MY-131-MC | 1.312 | 1.308 | MC | na | na | 120 | na | na | V. Soft | 6 |
| 2 | MY-133-MC | 1.330 | 1.325 | MC | na | na | 400 | na | na | Soft | 6 |
| 3 | AR-138 | 1.389 | 1.384 | MC | Str. | na | 150 | na | na | 1H | 4 |
| 4 | AR-139 | 1.395 | 1.391 | MC | Str. | na | 150 | na | na | 2H | 6 |
| 5 | AR-141 | 1.412 | 1.407 | MC | Str. | na | 150 | na | na | 2H | 4 |