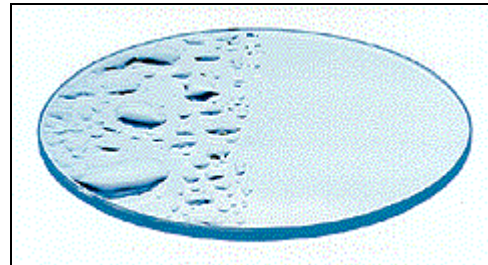


## MRC-Coating \_\_\_\_\_ **M**ulti **R**esistant **C**oating

The acronym "MRC" stands for "Multi Resistant Coating". The lens coating normally used for B+W photographic filters and certain SCHNEIDER lenses is resistant in several respects: for one thing, to the influence of dust and moisture, for another, it offers a significantly higher resistance to mechanical scratches on the surface of the lens. The cleaning of filters with this hard, water-repellant system of coatings has become altogether considerably easier.

The illustration at the right shows a prepared filter which has been moistened; the one half is coated with the traditional MC coating, and the other half with the new coating design MRC. It is quite evident: the water droplets do not stick on the MRC coating (at the right).



The broad-band anti-reflection coating MRC is produced by a plasma-supported [condensation-deposit process](#). In this process, the accelerated inert-gas ions condense the material deposited as very compact and resistant layers. The uppermost layer consists of fluorinated Siloxan. Each side of the filter consists of a system of eight interference layers, i.e., sixteen layers per filter in all, with a total thickness of about 250 nm! This corresponds to a thickness of  $\frac{1}{4}$   $\mu\text{m}$ ! The uppermost layer has low surface energy, which is to say low surface tension; this results in a high wetting angle of contact, e.g., against water, of about  $120^\circ$ . This phenomenon is similar to a drop of mercury on a piece of glass. It is in this low surface tension that the physical secret lies, namely, why the new MRC coating considerably inhibits the adhesion of moisture.