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MAFO
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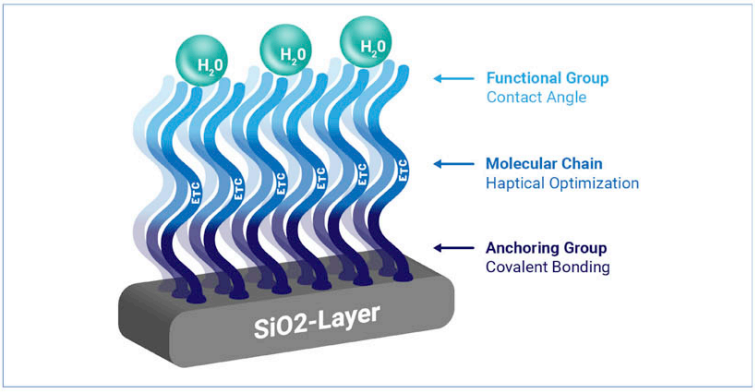
Next generation
of superhydrophobic materials

EVOCHEM Advanced Materials GmbH is the one-stop-source for all Thin-Film Applications. Our product portfolio covers a comprehensive range of evaporation materials and PVD-consumables, highly effective sputtering targets, monitoring crystals as well as parts for metallization.
Therefore, we are very pleased to present the successful expansion of our product portfolio – now encompassing superhydrophobic materials - which provide superior process and film properties:
EVOCHEM's new super-hydrophobic product line consists of:

- EVOCHEM ETC-ULTRA & EVOCHEM ETC-PRO
- EVOCHEM ETC-LIQUID & EVOCHEM ETC-METAL-LIQUID

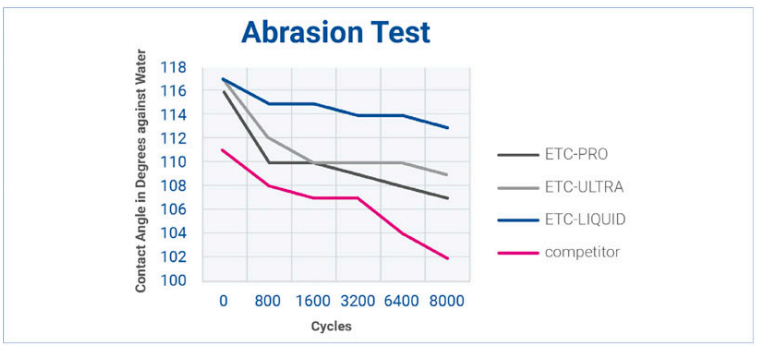
We have developed sophisticated materials that vastly reduce the adherence of impurities on surfaces while at the same time increasing the abrasion resistance of the coated layer.



Application: EVOCHEM ETC-PRO and EVOCHEM ETC-ULTRA are available as ready-to-use tablets for thermal vapor deposition as well as for E-Beam process, using a Top Coat liner. Alternatively, the coating can be completed by a wet-chemical process (dipping, spraying, flooding) - ETC-LIQUID and ETC-METAL-LIQUID.

Mode of action: ETC forms with the one end of its molecular chain covalent, highly stable bonds to oxide surfaces (e.g., SiO2) while the other, perfluorinated end, aligns itself away from the surface. As a result, ETC reduces the surface energy to a minimum and therefore allows for easy-to-clean properties. Furthermore the coating (e.g. AR layers) and the substrate itself are protected by a very smooth and abrasion resistant nano layer. EVOCHEM's new product portfolio already complies with the latest legislatives requirements where Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) are not present in neither the product nor the entire production process.

Performance: Initially, the material is applied by vapor deposition on a SiO2 layer providing a contact angle against water of 117 °.
During the entire test procedure, even after 8000 cycles with 1 kg pressure, the contact angle does not fall under 105 °. ETC-LIQUID - developed for mobile phones and touch displays - has demonstrated an even higher abrasion resistance.
Despite the reduction of the surface roughness by about 85%, the shaping of lenses can be performed easily without any alteration in the production process. After grinding, several tests have shown that the coating relaxes completely and no "ghost marks" remain on the surface.



Green Production: The pills are delivered in blister packs with 12 tablets per unit. Each pack allows a shelf life of 6 months and reduces waste by about 90% compared to individual packaging. Furthermore, our carrier tablets can be reused approximately 10 times more and therefore reduces further waste and cost.

Please do not hesitate to contact us if you would like to obtain further information or samples for testing.

Visit us at *www.evo-chem.de*
Or contact us at *info@evo-chem.de*