

CERAFLOUR 1053

PTFE-free blend of micronized Fischer-Tropsch wax and carnauba wax for reduced COF values and excellent abrasion and scratch resistance in aqueous, solvent-free, solvent-borne and UV coating systems

Polytetrafluoroethylene (PTFE) is a typical representative of perfluoroalkyl and polyfluoroalkyl (PFAS) substances. Its usage has been increasingly critically assessed at a global level for some time now, because products from this group of chemicals are suspected of being harmful to health. Nevertheless, PTFE possesses some desirable properties that harmless materials often do not have. In the field of wax additives, for example, conventional PTFE-based variants demonstrate outstanding abrasion and scratch resistance.

For this reason, BYK has developed sustainable alternatives to PE/PTFE wax additives that are both safe to use and ensure excellent application results: CERAFLOUR 1050, CERAFLOUR 1051, and CERAFLOUR 1052.

CERAFLOUR 1053 is a new wax additive in this family, which, in addition to good abrasion and scratch resistance, also significantly reduces the COF (coefficient of friction). It is food contact compliant.*

Improved abrasion and scratch resistance with only a slight impact on gloss in a white, BPA-free system



Without wax additive
Gloss 60°: 93, COF: 0.41

CERAFLOUR 1050
Gloss 60°: 74, COF: 0.13

CERAFLOUR 1051
Gloss 60°: 73, COF: 0.17

CERAFLOUR 1052
Gloss 60°: 72, COF: 0.15

CERAFLOUR 1053
Gloss 60°: 85, COF: 0.09

Test system: white, BPA-free formulation

Additive dosage: 1 % as supplied based on total formulation

Benefits

PTFE-free!

CERAFLOUR 1050 Family (CERAFLOUR 1050, 1051, 1052, and 1053)

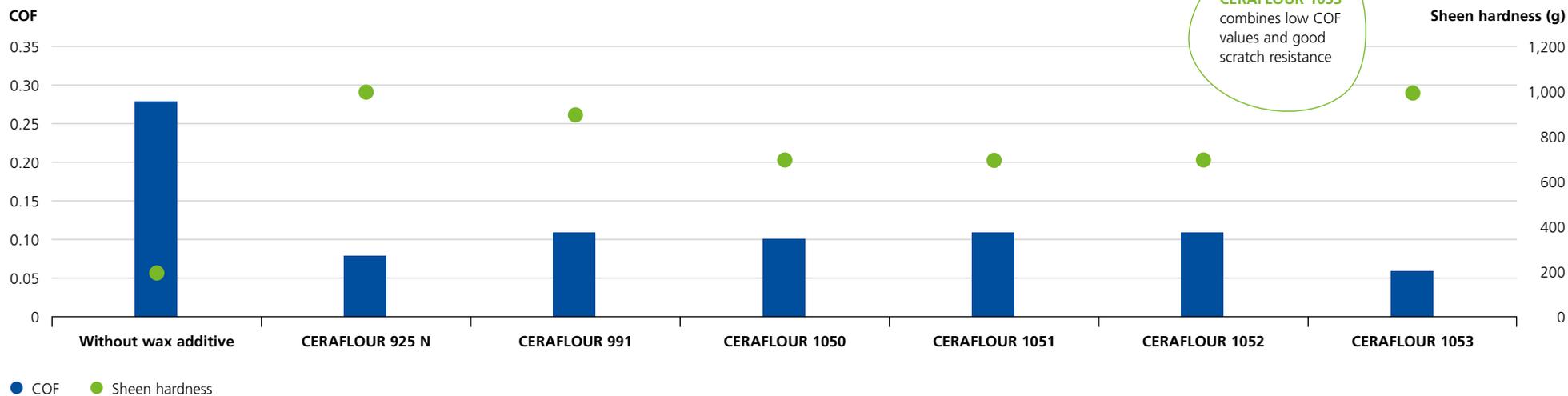
- Significant improvement in abrasion and scratch resistance
- Very fine particle size distribution
→ also suitable for clearcoats and systems with low film thicknesses
- Food contact compliant*

Additional benefits of CERAFLOUR 1053

- Significant reduction of the COF value, especially in aqueous systems

* As of December 2024. For information regarding the regulatory status according to food contact regulation, please visit www.byk.com/en/service/regulatory-affairs/food-contact or contact our BRIEF Team.

Improved surface slip and scratch resistance in an aqueous overprint varnish with an organic co-solvent



● COF ● Sheen hardness
Test system: aqueous, polyester-based overprint varnish
Co-solvent content: 7 % in total formulation
Additive dosage: 0.7 % as supplied based on total formulation

Technical properties

- Blend of micronized Fischer-Tropsch wax and carnauba wax
- Density (20 °C): 0.95 g/ml
- Melting point: 115 °C
- Particle size distribution (laser diffraction, volume distribution): D50: 6 µm, D90: 10 µm
- Delivery form: micropowder
- Recommended levels: 0.2–5 % additive (as supplied) based on the total formulation

Areas of applications

- Can coatings
- Wood and furniture coatings
- General industrial coatings
- Architectural coatings
- Printing inks



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