

SUPPLEMENTARY MATERIALS

WATER CONTACT ANGLE MEASUREMENTS

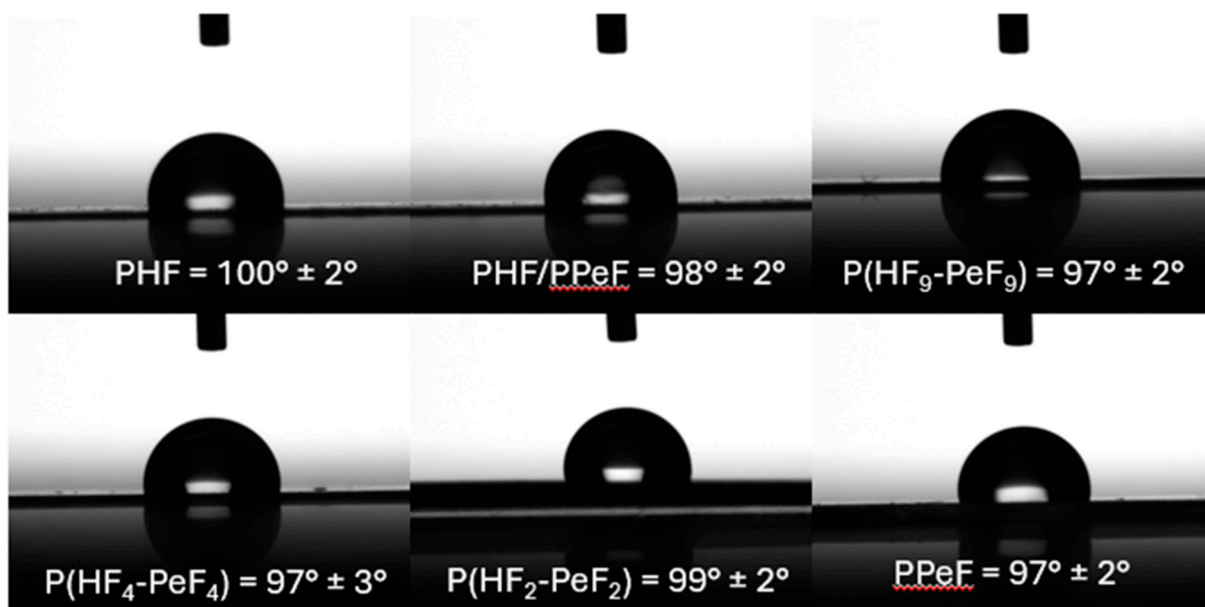


Figure S1. Images of water droplets immediately after deposition on film surfaces of PHF, PPeF the blend and the copolymers.

MECHANICAL CHARACTERISATION



PHF-PPeF
mechanical test.mp4

Video S1. PHF/PPeF blend mechanical test, with a focus on the immediate return and simultaneous rolling after the sample breaks.

HYDROLYTIC DEGRADATION TESTS

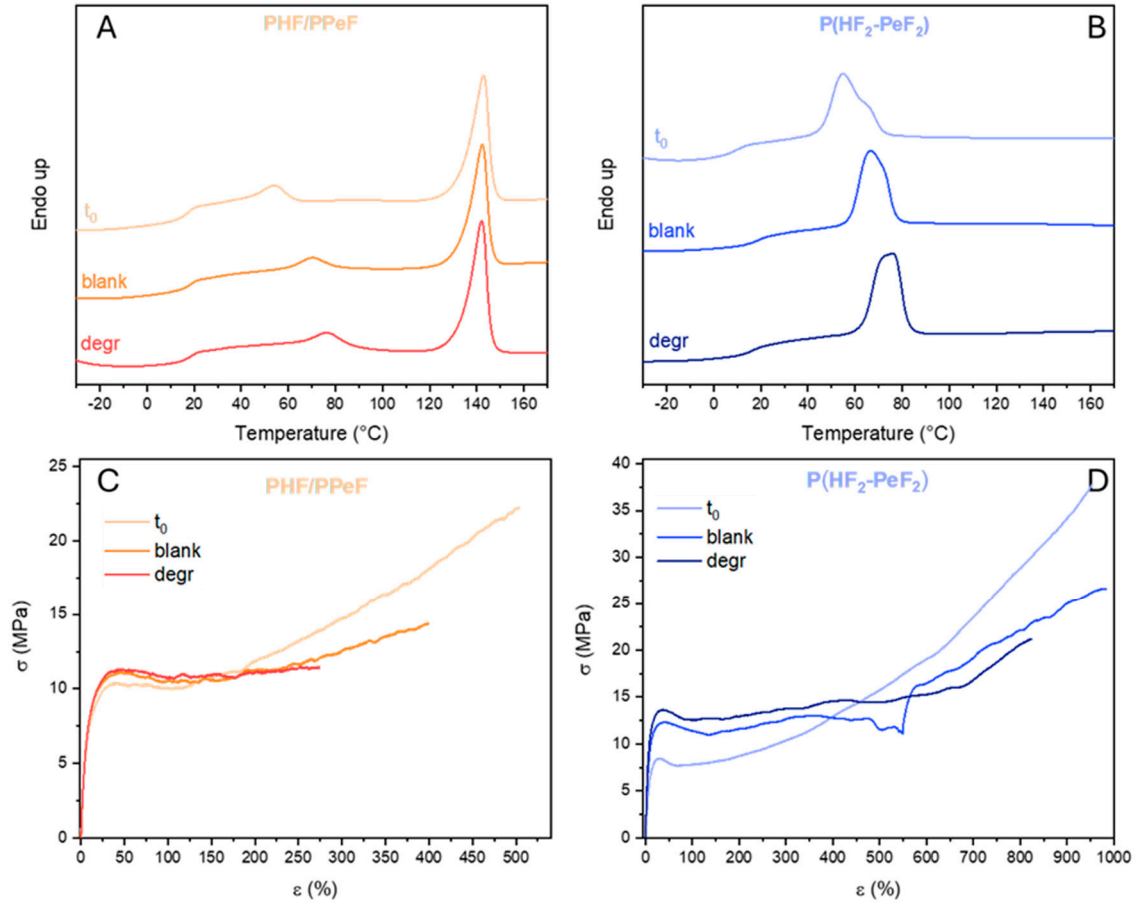


Figure S2. First DSC scan of partially degraded samples (degr), compared of the neat (t₀) and blank samples of (A) PHF/PPeF; (B) P(HF₂-PeF₂); Stress-strain curves of PHF/PPeF partially degraded samples (degr), compared to the neat (t₀) and blank samples of (C)PHF/PPeF; (D) P(HF₂-PeF₂).

Table S1. Thermal (DSC) and mechanical characterisation data of the partially hydrolysed PHF/PPeF and P(HF₂-PeF₂) samples (degr) compared with those of the non-hydrolysed (t₀) samples and the corresponding blanks.

	T _g (°C)	ΔC _p (J/g*°C)	T _{m1} (°C)	ΔH _{m1} (J/g)	T _{m2} (°C)	ΔH _{m2} (J/g)	E (MPa)	σ _b (MPa)	ε _b (%)
PHF/PPeF t ₀	17	0.433	54	3.6	143	26	184±34	21±5	479±65
PHF/PPeF blank	18	0.268	70	3.3	142	26	186±10	12±2	399 ± 87
PHF/PPeF degr	18	0.264	77	3.3	142	28	181±20	11±1	170±41
P(HF ₂ -PeF ₂) t ₀	16	0.481	55	17	63	4	111±12	42±5	950±93
P(HF ₂ -PeF ₂) blank	18	0.253	-	-	67	24	174±21	26±1	867±95
P(HF ₂ -PeF ₂) degr	18	0.293	-	-	75	27	190±26	26±4	903±98