Comparison between properties of construction plastics

Properties	PE-HWU	PP-DWU	PVC	PVDF	PVC-C	E-CTFE	PPs
Density, g/cm³ ISO 1183	0,955	0,915	1,44	1,78	1,54	1,68	0,95
Yield stress, MPa DIN EN ISO 527	22	32	58	55	53	31	32
Elongation at yield, % DIN EN ISO 527	9	8	3	8	4	4	8
Elongation at break, % DIN EN ISO 527	300	70	15	30	20	125	70
Tensile modulus of elasticity, MPa DIN EN ISO 527	800	1400	> 3000	1950	2300	1650	1300
Impact strength, kJ/m² DIN EN ISO 179	without break	without break	without break	without break		without break	without break
Notched impact strength, kJ/m² DIN EN ISO 179	12	7	4	12	7		6
Ball indentation hardness, MPa DIN EN ISO 2039-1	40	70	130	120	100	56	70
Shore hardness (D) ISO 868	63	72	82	78		74	72
Mean coefficient of linear thermal expansion, K E-1 DIN 53752	1,8 x 10^-4	1,6 x 10^-4	0,8 x 10^-4	1,3x10^-4	0,21 x 10^-4	0,5 x 10^-4	1,6 x 10^-4
Thermal conductivity, W/m * K DIN 52612	0,38	0,22	0,159	0,14	0,021	0,15	0,22
Fire behaviour DIN 4102	normal inflamable	normal inflamable	B1 certification	B1 certification	certification FM 4910	low flamma-bility	B1 certification
Dielectric strength, kV/mm DIN IEC 60243-1	47	52	39	25		14	22
Surface resistivity, Ohm DIN IEC 60093	10^14	10^14	10^13	10^13		10^15	10^14
Temperature range, °C	-50 to 0+ 80	0 to +100	0 to +60	-30 to + 140	-40 to +100	-40 to +150	0 to +100
Physiological safety in accordance with BfR	yes	yes	no	yes		yes	no