

Technical properties

U-PVC C-PVC PPC PPH LDPE PE 300 PE 500

Physical properties	Test method	Unit	U-PVC	C-PVC	PPC	PPH	LDPE	PE 300	PE 500
Specific gravity	ISO 1183	g / cm ³	1.45	1.55	0.91	0.91	0.92	0.96	0.96
Water absorption	ISO 62	%	<0.2	<0.2	0.01	0.01	0.01	0.01	0.01
Maximum service - Higher temp limit	-	°C	60	85	80	100	50	80	80
Maximum service - Lower temp limit	-	°C	0	-15	-20	0	-40	-50	-100

Mechanical properties	Test method	Unit	U-PVC	C-PVC	PPC	PPH	LDPE	PE 300	PE 500
Tensile strength at yield	ISO 527	MPa	55	57	26	33	11	22	28
Elongation at yield	ISO 527	%	3	3	7	8	-	9	8
Tensile strength at break	ISO 527	Mpa	>45	80	-	-	11	-	-
Elongation at break	ISO 527	%	>25	15	300	80	605	300	>300
Impact strength	ISO 179	kJ/m ²	no break	no break	no break	no break	no break	no break	no break
Notch impact strength	ISO 179	kJ/m ²	3	8	45	9	44	19	18
Ball indentation / Rockwell hardness	ISO 2039-1	MPa	120	150	50	70	44	40	>45
Shore - D	DIN 53505	-	80	90	67	72	49	64	66
Flexural strength	ISO 178	MPa	90	90	-	-	-	-	-
Modulus of elasticity	ISO 527	MPa	>3500	2500	1200	1700	220	900	110

Thermal properties	Test method	Unit	U-PVC	C-PVC	PPC	PPH	LDPE	PE 300	PE 500
Vicat - softening point VST/B/50	ISO 306	°C	80	105	-	-	88	-	80
Heat deflection temperature HDT/B	ISO 75	°C	-	102	-	-	39	-	-
Heat deflection temperature HDT/A	-	°C	72	-	-	-	-	-	-
Coefficient / linear thermal expansion	DIN 53752	K ⁻¹ *10 ⁻⁵	0.7	0.6	1.6	1.6	-	1.8	1.8
Thermal conductivity at 20 °C	DIN 52612	w/(m*k)	0.2	0.14	0.22	0.22	-	0.38	0.38

Electrical properties	Test method	Unit	U-PVC	C-PVC	PPC	PPH	LDPE	PE 300	PE 500
Volume resistivity	VDE 0303	Ω x m	-	>10 ¹⁵	-	-	10 ¹⁴	-	-
Surface resistivity	-	Ω	10 ¹³	>10 ¹³	10 ¹⁴	10 ¹⁴	10 ¹⁴	10 ¹⁴	>10 ¹⁴
Dielectric constant at 1MHz	-	-	-	3	-	-	2.18	-	-
Dielectric loss factor at 1MHz	DIN 53483	-	-	0.01	-	-	0.0007	-	-
Dielectric strength	VDE 0303	kV/mm	31	20-40	58	52	19.7	47	44
Tracking resistance	IEC 60112	-	-	KB 600	-	-	-	>600	>600

Additional data	Test method	Unit	U-PVC	C-PVC	PPC	PPH	LDPE	PE 300	PE 500
Bondability	-	-	•	•	•	•	•	•	•
Food compliance	FDA	-	•	-	•	•	•	•	•
Flammability	UL 94	-	V-0	V-0	HB	HB	HB	HB	HB

All information shown on this page is for comparison purposes only and should not be used for specific accuracy regarding differing environments. We also offer specific data to the actual manufactures product supplied, on application.

Resistant ● Partly resistant ● Non resistant -

PE1000	6 ext *	6 cast *	Nylon 66	Nylon 12	Acetal	PET	ABS	PVDF	PC	PETG	Acrylic
0.93	1.14	1.15	1.14	1.04	1.41	1.39	1.04	1.78	1.2	1.27	1.19
0.01	9	6.5	8	1.5	0.8	0.5	0.4	<0.04	0.35	0.2	0.2
80	85	105	95	95	105	115	70	150	120	65	70
-260	-40	-30	-30	-30	-40	-20	-50	-30	-100	-40	-
21	76	85	90	40	63	90	45	50	63	53	70
11	-	-	-	-	-	-	-	9	6	4	-
-	-	-	-	-	63	-	-	46	70	-	-
>300	>50	25	>40	>50	31	15	-	>50	110	40	4
no break	no break	no break	no break	no break	220	>50	333	252	no break	no break	17
>200	5.5	3.5	6	10	8	3	37	22	65	11.5	2
38	150/M85	165/M88	160/M88	-/M80	140/M84	170/M95	R 105	80	M70	R115	235
64	-	-	-	-	-	-	70	78	-	-	-
-	-	-	2800	-	2500	-	67	80	2300	2300	115
700	3250	3500	3100	1300	2600	3600	2260	2000	2300	2200	3300
82	-	-	-	-	150	-	103	140	148	80	105
-	-	-	-	-	-	-	100	145	132	68	-
-	70	80	85	50	96	75	88	104	142	72	90
1.8	0.9	0.8	0.8	1.2	1.1	0.6	-	1.2	0.7	0.51	0.7
0.38	0.28	0.29	0.28	0.23	0.31	0.27	0.2	0.13	0.21	0.19	0.18
-	10 ¹²	10 ¹²	10 ¹²	10 ¹¹	10 ¹³	10 ¹³	10 ¹⁵	>10 ¹³	10 ¹³	-	>10 ¹⁵
>10 ¹⁴	10 ¹³	10 ¹³	10 ¹³	10 ¹²	10 ¹³	10 ¹⁴	10 ¹⁵	>10 ¹⁴	10 ¹⁵	10 ¹⁴	>10 ¹³
-	3.3	3.2	3.3	36	3.8	3.2	2.9	7.25	2.9	2.4	2.7
-	0.021	0.016	0.026	0.03	0.008	0.014	0.008	0.18	0.01	0.02	0.02
44	25	25	27	32	20	22	18	22	30	30	30
>600	600	600	600	600	600	600	600	300	-	-	-
-	●	●	●	●	●	●	●	●	●	●	●
●	●	-	●	●	●	●	●	●	-	●	-
HB	HB	HB	V-2	HB	HB	HB	HB	V-0	HB	HB	HB

* Nylon material (Nylon 6 ext and Nylon 6 cast)

Due to a policy continual product development. Oadby Plastics Ltd reserves the right to alter any of the specifications given without prior to notice. The specification for any given application must be checked with Oadby Plastics Ltd prior to manufacture. No responsibility for accuracy is accepted by Oadby Plastics Ltd.