

# Caps, Closures and Tubes

PROPERTIES	PHYSICAL		MECHANICAL						THERMAL		OPTICAL		PECULIARITIES TYPICAL APPLICATIONS	SPECIAL ADDITIVES NU = NUCLEATED AS = ANTISTATIC SA = SLIP AGENT AB - ANTI BLOCK	
	Density	MFR 230°C, 2,16kg	Tensile Modulus	Tensile Stress at Yield	Tensile Elong. at Yield	Charpy notched impact strength			Ball indentation hardness (H358/30)	Vicat Softening Temp.	Heat De- flect. Temp. HDT/B	Haze 1mm			Gloss at 60°
	23°C					23 °C	0 °C	-20 °C							
Test Method	ISO 1183	ISO 1133	ISO 527	ISO 527	ISO 527	ISO 179			ISO 2039-1	ISO 306/A50	ISO 75-2				
Units	g/cm³	g/10 min	MPa	MPa	%	kJ/m²			MPa	°C	°C	%	%		
<b>PP HOMO</b>															
Moplen HP501H	0,9	2,1	1450	33	9	8,0	-	-	72	154	90	-	-	Good stiffness / impact balance at ambient temperature; Hinged closures	-
Moplen HP501L	0,9	6	1500	34	9	4,5	-	-	74	154	90	-	-	Good stiffness / impact balance at ambient temperature; Closures, pumps	-
Moplen HP548N	0,9	11	1800	36	9	4,0	-	-	71	154	105	-	-	Good stiffness / flowability balance; Hinged and Screw Closures	NU, AS
Moplen HP483R	0,9	27	1300	32	9	3,0	-	-	68	151	80	-	-	Good stiffness and high flowability, low opening torque; Closures, pumps	AS, SA
Moplen HP648T	0,9	53	1600	35	8	2,0	-	-	80	154	95	-	-	High fluidity and stiffness; Closures, pumps	NU, AS
<b>PP HECO</b>															
Moplen EP445L	0,9	6	1500	30	7	8,5	4,5	3,5	64	151	100	-	-	Good stiffness / impact balance at ambient temperature; Hinged closures	-
Moplen EP548P	0,9	16	1400	28	7	8,0	6,0	3,0	69	147	100	-	-	Good stiffness / impact balance at ambient temperature; Closures, pumps	-
Purell EP370S	0,9	42	1250	24	5	7,0	4,5	4,0	-	147	90	-	-	Good stiffness / flowability balance; Hinged and Screw Closures	NU
Moplen EP448T	0,9	48	1250	27	5	5,0	3,5	2,5	62	151	90	-	-	Good stiffness and high flowability, low opening torque; Closures, pumps	NU, AS
Moplen EP348U	0,9	70	1200	24	4	5,5	4,0	3,2	50	150	92	-	-	Very high fluidity, Good stiffness; Closures, pumps	NU, AS
Moplen EP549U	0,9	70	1260	23	4	9,0	6,0	5,0	52	147	98	-	-	Very high fluidity, Good stiffness; Closures, pumps	NU, AS
<b>PP RACO</b>															
Purell RP270G	0,9	1,8	1000	25	14	20,0	4,0	-	45	136	72	35	110	Collapsible tube bodies	-
Purell RP315M	0,9	8	1100	30	11	5,5	2,0	-	45	140	78	-	-	Good aesthetics, slip and antiblocking	SA, AB
Purell RP370M	0,9	8,5	850	25	13	7,0	2,0	-	-	135	68	-	-	Good balance of aesthetics and mechanicals	-
Moplen RP340N	0,9	11	1150	30	14	6,0	2,0	-	48	130	76	9	135	Good transparency; Transparent closures	NU
Moplen RP348R	0,9	25	1150	30	11	6,0	2,0	-	50	130	80	9	135	Good transparency, high fluidity; Transparent closures	NU, AS
Moplen RP3469	0,9	40	1100	20	14	5	2,5	-	55	127	70	9	135	Very high fluidity, good transparency, organoleptics, Transparent closures	NU, AS
<b>PP SPECIALTIES</b>															
Adstif HA840R	0,9	20	2300	41	6	2,0	-	-	85	158	110	50	95	High stiffness; Closures, sprayers	NU
Adstif EA648P	0,9	18	1700	32	5	6,5	3,0	2,5	71	153	100	-	70	High crystallinity, high stiffness; Closures	NU, AS
Clyrell RC449S	0,9	40	1250	30	11	4,0	1,5	-	-	126	75	5,5	140	Outstanding transparency, Good impact/stiffness balance	NU, AS
Clyrell RC549S	0,9	40	1470	34	10	3,0	1,2	-	-	135	86	10	130	Excellent impact/stiffness balance, good transparency	NU, AS
Clyrell EC348P	0,9	14	1200	28	13	5,0	2,0	1,0	-	128	75	15	110	Excellent Transparency and Good Impact; Closures, Sprayers	NU, AS
Clyrell EC340R	0,9	26	1180	23	12	6,5	3,5	2,0	-	123	90	32	100	Good Impact and Transparency; Closures, Sprayers	NU
Adflex X500F	0,89	7,5	500	14	20	65	-	45	-	94	58	-	-	Very soft Grade; Impact modifier, Soft touch	-

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PROPERTIES	PHYSICAL			MECHANICAL						THERMAL		ESCR	SPECIAL ADDITIVES NU = NUCLEATED AS = ANTISTATIC SA = SLIP AGENT AB = ANTI BLOCK		
	Density 23°C	Melt Flow Rate		Tensile Modulus	Tensile Stress at Yield	Tensile Elong. at Yield	Charpy notched impact strength		Shore D hardness	Ball indentation hardness (H358/30)	Vicat Softening Temp.			FNCT(*)	
		190°C, 2,16kg	190°C, 5kg				23 °C	-30 °C			ISO 306/A50	ISO 306/B50			
Test Method	ISO 1183	ISO 1133		ISO 527	ISO 527	ISO 527	ISO 179		ISO 868	ISO 2039-1	ISO 306/A50	ISO 306/B50	Internal method		
Units	g/cm <sup>3</sup>	g/10 min		MPa	MPa	%	kJ/m <sup>2</sup>			MPa	°C	°C	h		
<b>HDPE</b>															
Purell PE GF4750	0,950	0,4	1,5	1000	23	10	12	8	60	44	-	70	65	High ESCR, good organoleptics; Tube bodies and shoulders	-
Hostalen GF4750	0,950	0,4	1,5	1000	23	10	12	8	60	44	-	70	65	High ESCR, good organoleptics; Tube bodies and shoulders	-
Hostalen ACP 5331H	0,953	2,1	6,3	1150	30	10	7	5	62	51	-	75	9	Good ESCR and organoleptics; Multimodal grade. Tube shoulders, beverage closures	-
Hostalen 5231H	0,952	2,0	5,6	1100	25	10	10,4	5,3	70	50	-	74	30	High ESCR, good organoleptics. Beverage closures	-
Hostalen 5231H UV	0,952	2,0	5,6	1100	25	10	10,4	5,3	70	50	-	74	30	High ESCR, good organoleptics. Beverage closures	SA
Purell ACP 6541A	0,954	1,45	6,4	1100	22	10	11	4,5	55	54	-	70	25	High ESCR, fluidity and organoleptics. Multimodal grade. Beverage closures	-
Hostalen ACP 6541A UV	0,954	1,45	6,4	1100	22	10	11	4,5	55	54	-	70	25	High ESCR, fluidity and organoleptics. Beverage closures	SA
Hostalen GD4755	0,953	1,90	6,0	1100	27	10	6	4,5	62	51	-	75	8	Good balance of stiffness, toughness, ESCR and organoleptics. Beverage closures and engineering parts.	-
Purell GC7260	0,960	8	23	1350	30	10	4	2,5	64	57	-	72	2,5	High rigidity, good fluidity, organoleptic. Beverage and Water Closures, Tube Shoulders	-
Purell GC7260G	0,960	8	23	1350	30	10	4	2,5	64	57	-	72	2,5	High rigidity, good fluidity, organoleptic, enhanced thermal resistance. Beverage and Water Closures, Tube Shoulders	-
Purell GB7250	0,952	10	28	1000	24	10	2,5	2	61	46	-	64	2,5	Good fluidity, low warpage, organoleptic. Beverage and water closures, tube shoulders	-
<b>LDPE</b>															
Purell PE 1810E	0,920	0,4	-	200	9	-	-	-	45	16	92	-	-	Tube bodies and shoulders, closures	-
Purell PE 1840H	0,919	1,5	-	200	9	15	-	-	45	15	88	-	-	Tube bodies and shoulders, closures	-
Lupolen 1840D	0,919	0,25	-	200	9	-	-	-	45	15	93	-	-	Tube bodies and shoulders, closures	-
Lupolen 2420H	0,924	1,9	-	260	11	-	-	-	49	18	94	-	-	Tube bodies and shoulders, closures	-
Lupolen 2426H	0,924	1,9	-	260	11	-	-	-	49	18	94	-	-	Tube bodies and shoulders, closures	SA, AB
Purell PE 3020K	0,927	4	-	300	13	-	-	-	51	21	97	-	-	High rigidity, good opticals and good chemical resistance; Tube bodies and shoulders, closures	-
Lupolen 3026K	0,927	4	-	300	13	-	-	-	51	21	97	-	-	High rigidity, good opticals and good chemical resistance; Tube bodies and shoulders, closures	SA, AB
Lupolen 1800S	0,917	20	-	150	8	-	-	-	45	13	80	-	1,5 (ASTM)	Softness and high fluidity. Special parts	-
Purell 2410T	0,924	36	-	280	11	-	-	-	49	18	89	-	0,5 (ASTM)	Softness and very high fluidity. Special parts	-

(\*) FNCT (Full Notch Creep Test), 6MPa, 2% Arkopal, 50°C

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# Quality Circular Polymers | Caps & Closures

TYPICAL PROPERTIES			MECHANICAL						ADDITIONAL INFO	RECYCLED PC %	RESTRICTION	TYPICAL APPLICATIONS	SPECIFIC CHARACTERISTICS
	Density	MFR 230°C, 2,16kg	Tensile Modulus	Tensile Stress at Yield	Tensile Elongation at Break	Flexural Modulus	Charpy Impact Notched						
	23°C						23 °C	0 °C					
Test Method	ISO 1183	ISO 1133-1	ISO 527	ISO 527	ISO 527	ISO 527	ISO 179/1eA		COLOR				
Units	g/cm³	g/10 min	MPa	MPa	%	MPa	kJ/m²						
<b>PP HETEROPHASIC COPOLYMER, QCP</b>													
Moplen QCP300P	0,915	16	1300	27	40	1200	6,5		Grey	>95%	See disclaimer below	Containers, pails, crates, furniture, caps	Medium fluidity
Moplen QCP300P Black	0,917	16	1200	27	50	1150	6,0		Black	>95%	See disclaimer below	Containers, pails, crates, furniture, caps	Medium fluidity
Moplen QCP540S	0,950	35	1400	24	25	1300	6,0		Grey	>85%	See disclaimer below	Crates, boxes, pallets, pails, compounds, caps	Good fluidity
Moplen QCP540S Black	0,950	35	1400	24	25	1300	6,0		Black	>85%	See disclaimer below	Crates, boxes, pallets, pails, compounds, caps	Good fluidity
Moplen QCP300U	0,915	70	1250	26	10	1150	5,0		Grey	>95%	See disclaimer below	Large containers, boxes, DVD boxes, compounds	Very high fluidity
Moplen QCP300U Black	0,915	70	1150	25	10	1050	4,5		Black	>95%	See disclaimer below	Large containers, boxes, DVD boxes, compounds	Very high fluidity

\*Restrictions: this product is not intended for highly regulated applications including food contact, potable water contact, medical and pharmaceutical applications.