Product Comparison

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Technical Data

Product Description	
ESTAPROP 1006 V2 H	PP copolymer flame retardant class V2, PBDE and antimonium trioxide free, no blooming, low smoke emission, good physical and mechanical characteristics. Electrical field, chairs for interiors.
Generic PP Copolymer	This data represents typical values that have been calculated from all products classified as: Generic PP Copolymer This information is provided for comparative purposes only.

General	ESTAPROP 1006 V2 H	Generic PP Copolymer
Manufacturer / Supplier	• Cossa Polimeri S.r.l.	• Generic
Generic Symbol	• PP Copolymer	• PP Copolymer
Material Status	• Commercial: Active	• Commercial: Active
Literature [1]	• Technical Datasheet (English)	--
Search for UL Yellow Card	• Cossa Polimeri S.r.l.	--
Availability	• Europe	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Additive	• Flame Retardant	--
Features	• Antimony Free • Bromine Free • Copolymer • Flame Retardant • Low Smoke Emission • Non-Blooming	--
Uses	• Electrical/Electronic Applications • Furniture	--
Forms	• Pellets	--

Physical	ESTAPROP 1006 V2 H	Generic PP Copolymer	Unit	Test Method
Density / Specific Gravity				
-- [3]	0.932	--		ASTM D792
--	--	0.892 to 0.914		ASTM D792
--	--	0.836 to 0.967	g/cm³	ISO 1183
--	--	0.899 to 0.911	g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR)				
230°C/2.16 kg	20	0.30 to 36	g/10 min	ASTM D1238
230°C/2.16 kg	--	0.30 to 27	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	--	0.30 to 41	cm³/10min	ISO 1133
Molding Shrinkage				
Flow	0.015 to 0.018	0.013 to 0.018	in/in	ASTM D955
Across Flow	--	0.014 to 0.017	in/in	ASTM D955
--	--	0.97 to 1.8	%	ISO 294-4

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Physical	ESTAPROP 1006 V2 H	Generic PP Copolymer	Unit	Test Method
Water Absorption				
24 hr	--	0.019 to 0.021	%	ASTM D570
24 hr, 73°F	--	0.010 to 0.20	%	ISO 62
Equilibrium, 73°F, 50% RH	--	0.020 to 0.18	%	ISO 62
Mechanical	**ESTAPROP 1006 V2 H**	**Generic PP Copolymer**	**Unit**	**Test Method**
Tensile Modulus				
--	--	112000 to 196000	psi	ASTM D638
--	--	125000 to 323000	psi	ISO 527-1
Tensile Strength				
Yield	--	2000 to 4690	psi	ASTM D638
Yield	--	2430 to 4410	psi	ISO 527-2
Break	2900	1830 to 4100	psi	ASTM D638
Break	--	1140 to 14500	psi	ISO 527-2
--	--	2340 to 4730	psi	ASTM D638
--	--	2060 to 4440	psi	ISO 527-2
Tensile Elongation				
Yield	--	4.0 to 16	%	ASTM D638
Yield	--	2.0 to 14	%	ISO 527-2
Break	50	2.0 to 510	%	ASTM D638
Break	--	2.5 to 410	%	ISO 527-2
Nominal Tensile Strain at Break	--	18 to 210	%	ISO 527-2
Flexural Modulus				
--	218000	113000 to 214000	psi	ASTM D790
--	--	91700 to 220000	psi	ISO 178
Flexural Strength				
--	--	2600 to 7740	psi	ASTM D790
--	--	2900 to 5800	psi	ISO 178
Yield	--	3660 to 5200	psi	ASTM D790
Impact	**ESTAPROP 1006 V2 H**	**Generic PP Copolymer**	**Unit**	**Test Method**
Charpy Notched Impact Strength	--	0.48 to 5.7	ft·lb/in²	ISO 179
Charpy Unnotched Impact Strength	--	1.7 to 38	ft·lb/in²	ISO 179
Notched Izod Impact				
--	--	0.54 to 2.5	ft·lb/in	ASTM D256
32°F	0.56	--	ft·lb/in	ASTM D256
73°F	0.75	--	ft·lb/in	ASTM D256
--	--	0.95 to 20	ft·lb/in²	ISO 180
Unnotched Izod Impact				
--	--	0.18 to 22	ft·lb/in	ASTM D4812
--	--	2.9 to 47	ft·lb/in²	ISO 180
Gardner Impact	--	100 to 360	in·lb	ASTM D3029
Gardner Impact	--	158 to 320	in·lb	ASTM D5420

Hardness	ESTAPROP 1006 V2 H	Generic PP Copolymer	Unit	Test Method
Rockwell Hardness				
--	--	63 to 107		ASTM D785
--	--	54 to 95		ISO 2039-2
Durometer Hardness				
--	--	59 to 76		ASTM D2240
--	--	59 to 74		ISO 868
Ball Indentation Hardness	--	6710 to 10200	psi	ISO 2039-1
Thermal	**ESTAPROP 1006 V2 H**	**Generic PP Copolymer**	**Unit**	**Test Method**
Deflection Temperature Under Load				
66 psi, Unannealed	--	156 to 276	°F	ASTM D648
66 psi, Unannealed	--	165 to 240	°F	ISO 75-2/B
264 psi, Unannealed	131	109 to 139	°F	ASTM D648
264 psi, Unannealed	--	118 to 153	°F	ISO 75-2/A
Brittleness Temperature	--	-49.0 to 23.0	°F	ASTM D746
Ductile / Brittle Transition Temperature	--	-68.5 to -48.4	°F	ISO 6603-2
Vicat Softening Temperature				
--	--	301 to 315	°F	ASTM D1525
--	304	--	°F	ASTM D1525 [4]
--	--	129 to 315	°F	ISO 306
Melting Temperature				
--	--	324 to 330	°F	
--	--	320 to 333	°F	ISO 11357-3
--	--	305 to 334	°F	ASTM D3418
--	--	319 to 320	°F	ISO 3146
CLTE - Flow				
--	--	5.3E-5 to 5.7E-5	in/in/°F	ASTM D696
--	--	2.8E-5 to 8.6E-5	in/in/°F	ISO 11359-2
RTI Elec	--	149 to 241	°F	UL 746B
RTI Imp	--	149 to 151	°F	UL 746B
RTI Str	--	149 to 151	°F	UL 746B
Electrical	**ESTAPROP 1006 V2 H**	**Generic PP Copolymer**	**Unit**	**Test Method**
Surface Resistivity				
--	--	2.0 to 2.5E+13	ohms	ASTM D257
--	--	1.0E+2 to 1.0E+15	ohms	IEC 60093
Volume Resistivity				
--	--	50 to 1.3E+16	ohms·cm	ASTM D257
--	--	1.0E+2 to 1.0E+15	ohms·cm	IEC 60093
--	--	9.8E+12 to 1.0E+13	ohms·m	IEC 62631-3-1
Dielectric Strength	--	1000	V/mil	ASTM D149
Arc Resistance	--	130 to 131	sec	ASTM D495
Comparative Tracking Index	--	588 to 600	V	IEC 60112

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Flammability	ESTAPROP 1006 V2 H	Generic PP Copolymer	Unit	Test Method
Burning Rate	--	0.0 to 4.0	in/min	ISO 3795
Flame Rating				UL 94
0.06 in	V-2	--		
0.13 in	V-2	--		
Glow Wire Flammability Index	--	1750 to 1760	°F	IEC 60695-2-12
Glow Wire Ignition Temperature				IEC 60695-2-13
--	--	1200 to 1760	°F	
0.08 in	1760	--	°F	
Oxygen Index				
--	--	21 to 28	%	ASTM D2863
--	--	25 to 36	%	ISO 4589-2

Optical	ESTAPROP 1006 V2 H	Generic PP Copolymer	Unit	Test Method
Gloss	--	10 to 91		ASTM D2457
Haze	--	0.500 to 11.1	%	ASTM D1003

Injection	ESTAPROP 1006 V2 H	Generic PP Copolymer	Unit
Drying Temperature	--	163 to 178	°F
Drying Time	--	1.0 to 3.0	hr
Suggested Max Moisture	--	0.050 to 0.20	%
Suggested Max Regrind	--	8	%
Rear Temperature	--	353 to 416	°F
Middle Temperature	--	365 to 410	°F
Front Temperature	--	374 to 422	°F
Nozzle Temperature	--	381 to 431	°F
Processing (Melt) Temp	--	373 to 491	°F
Mold Temperature	--	68 to 115	°F
Injection Pressure	--	800 to 14500	psi
Holding Pressure	--	440 to 9430	psi
Back Pressure	--	25.0 to 1100	psi
Screw Speed	--	40 to 400	rpm
Clamp Tonnage	--	0.71 to 2.3	tons/in²
Cushion	--	0.185 to 0.375	in

Injection Notes

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Extrusion	ESTAPROP 1006 V2 H	Generic PP Copolymer	Unit
Drying Temperature	--	167 to 176	°F
Drying Time	--	1.5 to 3.0	hr
Suggested Max Moisture	--	0.075 to 0.10	%
Cylinder Zone 1 Temp.	--	364 to 412	°F
Cylinder Zone 2 Temp.	--	409 to 412	°F

Extrusion	ESTAPROP 1006 V2 H	Generic PP Copolymer	Unit
Cylinder Zone 3 Temp.	--	364 to 412	°F
Cylinder Zone 4 Temp.	--	409 to 412	°F
Cylinder Zone 5 Temp.	--	364 to 412	°F
Melt Temperature	--	374 to 448	°F
Die Temperature	--	385 to 424	°F

Extrusion Notes

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Notes

[1] These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

[2] Typical properties: these are not to be construed as specifications.

[3] 23°C

[4] Rate A (50°C/h), Loading 1 (10 N)