TECHNICAL DATA SHEET

For Impellers CHV 125 -400

PRE-ELEC PP 1372

0201

PRE-ELEC PP 1372 is a conductive thermoplastic compound based on polypropylene. Conductivity is achieved by using special conductive carbon black. In addition to a low electrical resistivity PRE-ELEC PP 1372 has an excellent balance of mechanical properties and is easy to injection mould.

Typical applications include injection moulded crates, boxes and tote bins for electronic components and other static sensitive devices (SSD).

Appearance	granule
Colour	black
Moisture content	max. 0.15% when produced
Packaging	20 kg polyethylene valve bags, 1000 kg on one way pallet, stretch wrapped or in 1100 kg octabin
Storage	can be stored one year in normal storing conditions
Processing	PRE-ELEC PP 1372 compound can be processed without modifications in the machines using normal processing conditions as with PP. Pre-drying is recommended e.g. 2 - 4 hours at 60 - 80 °C (140 – 175 °F).

Recommended processing parameters

Injection moulding	Material temperature	200 - 250°C
	Mould temperature	60 - 80°C
	Injection pressure	600 - 800 bar
	Injection speed	moderate

These temperatures can be used for guidance purposes. They will also depend on the equipment used. The instructions of the equipment manufacturer should be followed.

The heat content of the compound leaving the machine is high due to its relatively poor flow which leads to elevated temperatures and increased pressure, which when released raises the temperature of the material further. As the self-ignition temperature of polymer/carbon black compounds is around 350 °C (660 °F) care must be taken that e.g. purged material does not catch fire. Overheated material can be cooled with e.g. water.

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TECHNICAL DATA SHEET

PRE-ELEC PP 1372

PHYSICAL PROPERTIES	ISO TEST METHOD	MET-RIC UNITS	VALUE	ASTM TEST METHOD	U.S. Con-ven-tional Units	VALUE
Specific gravity		g/cm³	0.98			
Density					lb/in³	0.035
Melt Flow Index	1133			D-1238		
230°C / 2.16 kg		g/10min	0.6			
230°C / 5.0 kg		g/10min	4			
Tensile strength	527	MPa	18	D-638	psi	2600
Yield strength	527	MPa	26	D-638	psi	3800
Elongation at break	527	%	66	D-638		
Elongation at yield	527	%	11	D-638		
Modulus of elasticity	178	MPa	1200	D-790	10^3 psi	174
Impact strength, unnotched Izod	180			D-256		
4.0 mm (0.156-in) thickness,23°C/73°F		J/m	NB		ft-lb/in	NB
4.0 mm (0.156-in) thickness,-20°C/-4°F		J/m	-		ft-lb/in	-
Impact strength, notched Izod	180			D-256		
4.0 mm (0.156-in) thickness,23°C/73°F		J/m	453		ft-lb/in	8.5
4.0 mm (0.156-in) thickness,-20°C/-4°F		J/m	-		ft-lb/in	-
Vicat softening point	306/			D-1525		
Rate A	A50	°C	150		°F	300
Rate B	B50	°C			°F	
Deflection temperature	75/			D-648		
0.45 MPa (66 psi) - load	Method Bf	°C	90		°F	194
1.8 MPa (264 psi) - load	Method Af	°C			°F	
Volume resistivity	D-257*	Ω cm	$<10^3$	D-257	Ω cm	
Surface resistivity	D-257*	Ω	$<10^4$	D-257	Ω	
Mould shrinkage	294-4	%	1.2-1.4	D-955	in/in	0.012-0.014
Hardness Shore A	868		96	D-2240		
Shore D			71			

test specimen: 4.0 mm (0.156 in) thick, 10.0 mm (0.391 in) wide moulded rod

The information in this data sheet represents typical values obtained by us and should not be regarded as a specification.

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SIMONA

For Casings CMV 125-400

PP-EL-S

Material specifications

	PP-EL-S
Extruded to moulding compound standard	DIN EN ISO 1873, Teil 1
Pressed to moulding compound standard	DIN EN ISO 1873, Teil 1
Moulding compound extruded	PP-H,ECFY,16-05-006
Moulding compound pressed	PP-H,QCFY,16-05-006
Density, g/cm³ ISO 1183	1,180
Yield stress, MPa DIN EN ISO 527	25
Elongation at yield, % DIN EN ISO 527	7
Elongation at break, % DIN EN ISO 527	40
Tensile modulus of elasticity, MPa DIN EN ISO 527	1400
Impact strength, kJ/m² DIN EN ISO 179	without break
Notched impact strength, kJ/m² DIN EN ISO 179	> 4
Ball indentation hardness, MPa DIN EN ISO 2039-1	66
Shore hardness (D) ISO 868	70
Mean coefficient of linear thermal expansion, K E-1 DIN 53752	$1{,}6 \times 10^{-4}$
Thermal conductivity, W/m * K DIN 52612	-
Fire behaviour DIN 4102	low flammability
Dielectric strength, kV/mm DIN IEC 60243-1	-
Surface resistivity, Ohm DIN IEC 60093	$\leq 10^6$

Temperature range, °C	+5 to +100
Physiological safety in accordance with BfR	no

All specifications are deemed to be approximate values and may vary depending on the processing methods used and the specimen or test piece. In general, data specified applies to average values measured on extruded sheets with a thickness of 4mm. Deviations from the values specified are possible if the sheets in this thickness are not available. Information presented herein cannot necessarily be applied to finished items or products. Suitability of materials for a specific field of application must be assessed by the party responsible for processing or the end-user. All technical specifications presented herein are designed merely to provide assistance in terms of project planning. Under no circumstances do they constitute a guaranteed property or quality of the items presented.

For further information, please contact our Applications Technology Department: ata@simona.de.