

TECHNICAL DATA SHEET

PIEZOTECH® FC30 POWDER

	ACCEPTANCE RANGES	GUIDELINE VALUES	METHOD
COMPOSITION			
VF3 CONTENT (<i>mol %</i>)	30 ± 1.5		¹ H NMR
THERMAL PROPERTIES			
GLASS TRANSITION T _G (°C)		-40 - -20	DSC (10 mg) Second heat 10°C/min
CURIE TRANSITION T _C (°C)	96 - 106		
MELTING PEAK T _M (°C)		149 - 153	
ENTHALPY OF CURIE TRANSITION (<i>J/g</i>)	-	17 - 22	
ENTHALPY OF MELTING (<i>J/g</i>)	-	26 - 30	
PHYSICAL PROPERTIES			
REFRACTIVE INDEX		1.40 – 1.42	ASTM D638 <i>! Warning : strongly dependent on processing/annealing conditions</i>
DENSITY ρ		1.88 – 1.90	
TENSILE MODULUS Y (<i>MPa</i>)		> 800	
MOLAR MASS CHARACTERISTICS			
MFI (<i>230°C under 10 kg</i>)	1 - 8		ASTM D1238
MW (<i>kDA</i>) <i>Mass average molar mass</i>		520 – 860	SEC Chromatography Solvent DMSO Refractometric detection PMMA standard
MN (<i>kDA</i>) <i>Number average molar mass</i>		200 - 320	
PI <i>Dispersity index (Mw/Mn)</i>		2.6 – 2.9	
FERROELECTRIC CHARACTERISTICS			
REMNANT POLARIZATION (<i>mC/m²</i>)		65	Poled @ 150V/μm
COERCIVE FIELD (<i>V/μm</i>)		50	
SPONTANEOUS POLARIZATION (<i>mC/m²</i>)		67	Berlincourt (700N/100Hz) Capacity measurement at 1kHz
d ₃₃ (<i>pC/N</i>)		-22	
RELATIVE PERMITTIVITY		11	