

**PET**  
TECHNICAL DATA SHEET

**FULL NAME:** POLYETHYLENE TEREPHTHALATE

MECHANICAL PROPERTIES	TEST METHOD	UNIT	CONDITION OF SPECIMEN	GUIDELINE VALUE
TENSILE STRENGTH AT BREAK	ISO 527	MPA	DRY	80
	ISO 527	MPA	MOIST	-
ELONGATION AT BREAK	ISO 527	%	DRY	20
	ISO 527	%	MOIST	-
MODULUS OF ELASTICITY IN TENSION	ISO 527	MPA	DRY	3200
	ISO 527	MPA	MOIST	-
CHARPY IMPACT STRENGTH	ISO 179/1EA	KJ/M <sup>2</sup>	DRY +23°C	82
		KJ/M <sup>2</sup>	DRY -40°C	-
CHARPY NOTCHED IMPACT STRENGTH	ISO 179/1EA	KJ/M <sup>2</sup>	DRY	14
		KJ/M <sup>2</sup>	MOIST	-
HARDNESS SHORE SCALE D	ISO 868		DRY	81
TIME YIELD LIMIT <sub>1/1000</sub>	ISO 899	MPA	MOIST +23°C/50% RH	12
	ISO 899	MPA	DRY +100°C	

THERMAL PROPERTIES				
HEAT DISTORTION TEMPERATURE	ISO 75	°C	DRY – METHOD A	67
	ISO 75	°C	DRY – METHOD B	165
MELTING POINT	ISO 3146	°C	-	255
MAXIMUM SERVICE TEMPERATURE FOR FEW HOURS OPERATION		°C	-	160
TEP 5 000 HOURS (50% OF TENSILE STRENGTH) <sup>1)</sup>	IEC 216	°C	-	115
TEP 20 000 HOURS (50% OF TENSILE STRENGTH) <sup>1)</sup>	IEC 216	°C	-	100
THERMAL COEFFICIENT OF LINEAR EXPANSION	DIN 53452	1/K•10 <sup>-5</sup>	DRY	6

DIELECTRIC PROPERTIES				
DIELECTRIC CONSTANT	IEC 250	-	DRY - 1 MHZ	3,3
	IEC 250	-	MOIST	-
DISSIPATION FACTOR TAN	IEC 250	-	DRY – 1 MHZ	0,02
	IEC 250	-	MOIST	-
DIELECTRIC STRENGTH	IEC 243	KV/MM	DRY	50
	IEC 243	KW/MM	MOIST	-
VOLUME RESISTIVITY	IEC 93	Ω•CM	DRY	10 <sup>16</sup>
	IEC 93	Ω•CM	MOIST	-
RESISTANCE TO TRACKING	IEC 112	-	DRY/MOIST KA/KB METHOD	KA >450
	IEC 112	-	DRY/MOIST KC METHOD	KA >600

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MISCELLANEOUS PROPERTIES				
MASS DENSITY - METHOD D, E	ISO 1183	G/CM <sup>3</sup>	DRY	1,36
MOISTURE ABSORPTION AT 23°C, 50% RH - SATURATION	ISO 1110	%	-	0,23
WATER ABSORPTION - SATURATION	ISO 62	%	-	0,5
FIRE PERFORMANCE FLAMEABILITY ACC. VDE	VDE 0304	-	DRY	II B
FIRE PERFORMANCE FLAMEABILITY OF INTERIOR MATERIALS IN PASSANGER CARS H>1 MM	FMVSS 302	MM/MIN	MOIST	< 100
FIRE PERFORMANCE FLAMEABILITY UL STANDARD (THICKNESS OF SPECIMEN 1,6 MM)	UL 94	-	-	HB
RESISTANCE TO WEAR <sup>2)</sup>	ISO 7148-2	μM/KM	DRY	22

REV.	DATE	DESCRIPTION	MODIFIED PARAGRAPHS	WRITTEN BY	APPROVED BY
01	12/2020	LAYOUT UPDATE	//	601.37	601.37

<sup>1)</sup> DATAS OF RESIN ONLY

<sup>2)</sup> MADE BY A PIN / ROTATING DISC TEST ACCORDING DIN-ISO 7148-2 UNDER FOLLOWING CONDITIONS: R<sub>a</sub> = 0,35 - 0,45 μM (STEEL DISC), v=0,3 M/S, p = 3 N/MM<sup>2</sup>, TIME T>16H

**THIS DATASHEET AND ALL PROPRIETIES INDICATED COME DIRECTLY FROM THE PRODUCER'S STUDIES AND TESTS. D.H. LAMINA S.R.L. DOES NOT PRODUCE THE MATERIAL.**

THE CONTENTS OF THIS DATASHEETS ARE MEANT TO GIVE AN OVERVIEW OF THE PRODUCT'S PROPRIETIES. IT REFLECTS OUR CURRENT KNOWLEDGE AND MAY NOT BE COMPLETE. THE VALUES SHOULD BE TAKEN AS GUIDE VALUES BECAUSE THEY ARE DEPENDENT ON SURROUNDING CONDITIONS AND MACHINING METHODS. THE VALUES ARE IN NO WAY A LEGALLY BINDING ASSURANCE OF THE PRODUCT'S PROPRIETIES OR ITS SUITABILITY FOR USE IN A SPECIFIC APPLICATION. ALL STATED VALUES ARE AVERAGE ESTABLISHED FROM MANY INDIVIDUAL TESTS. FOR SPECIFIC APPLICATIONS, WE RECOMMEND DETERMINING SUITABILITY BY MEANS A TRIAL.

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