

PE-UHMW REG
TECHNICAL DATA SHEET

FULL NAME: REGENERATED ULTRA-HIGH MOLECULAR WEIGHT POLYETHYLENE

PROPERTIES	TESTMETHOD	UNIT	GREEN	BLACK
DESCRIPTION	DIN EN ISO 1043-1	-	PE-UHMW REG.	PE-UHMW REG.
SPECIFIC GRAVITY	DIN EN ISO 1183-1	G/CM ³	≥ 0,93	≥ 0,93
MEAN MOLECULAR WEIGHT	VISCOMETRY ANALYSIS	MIO. G/MOL	~ 3-4	~ 3-4
WATER ABSORPTION AT 23° C	DIN EN ISO 62	%	< 0,01	< 0,01

**MECHANICAL PROPERTIES AT STANDARD ATMOSPHERE –
DIN EN ISO 291 – 23/50**

ABRASION (SAND SLURRY TEST)	DIN EN ISO 15527	%	130	130
YIELD STRESS	DIN EN ISO 527-1	MPA	≥ 17	≥ 17
ULT. ELONGATION	DIN EN ISO 527-1	%	~ 300	~ 200
MODULUS OF ELASTICITY (TENSILE)	DIN EN ISO 527-1	MPA	~ 800	~ 800
IMPACT STRENGTH – CHARPY	DIN EN ISO 179-1	KJ/M ²	NO BREAK	NO BREAK
SHORE – HARDNESS D	DIN EN ISO 868	-	~62 – 65	~62 – 65
BALL INDENTATION HARDNESS	DIN EN ISO 2039-1	MPA	~ 38	~ 38
DYNAMIC COEFFICIENT OF FRICTION AGAINST STEEL	DIN ISO 7148-2	-	0,15 – 0,20	0,15 – 0,20

THERMAL PROPERTIES

THERMAL CONDUCTIVITY AT 23°C	ISO 52612	W / M X K	>0,40	>0,40
COEFFICIENT OF EXPANSION (BETWEEN 23°C – 80°C)	ISO 1135-2	M / K X M	20x10 ⁻⁵	20x10 ⁻⁵
OPERATING TEMPERATURE	SHORT TERM LONG TERM	°C °C	~ 100 ~ -100 / +80	~ 100 ~ -100 / +80
MELTING TEMPERATURE	ISO 11357-3	°C	135	135
FLAMMABILITY ACC. TO UL94 – TEST THICKNESS 3/6 MM	-	-	HB	HB

**ELECTRICAL PROPERTIES AT STANDARD ATMOSPHERE –
DIN EN ISO 291 – 23/50**

DIELECTRIC STRENGTH	IEC 60243-1	KV/MM	~40	~40
INSULATION RESISTANCE	DIN EN 62631 -3-1	Ω X CM	>10 ¹³	>10 ⁹

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SURFACE RESISTANCE	DIN EN 62631 -3-1	Ω	$>10^{14}$	$>10^9$
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REV.	DATE	DESCRIPTION	MODIFIED PARAGRAPHS	WRITTEN BY	APPROVED BY
01	12/2020	LAYOUT UPDATE	//	602.18	602.18

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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