

**PPS GF40**  
TECHNICAL DATA SHEET

**FULL NAME:** POLYPHENYLENE SULFIDE FILLED 40% GLASS FIBER

MECHANICAL PROPERTIES			
MODULUS OF ELASTICITY (TENSILE TEST) <sup>1)</sup>	DIN EN ISO 527-2	MPA	6500
TENSILE STRENGTH	DIN EN ISO 527-2	MPA	83
TENSILE STRENGTH AT YIELD	DIN EN ISO 527-2	MPA	83
ELONGATION AT YIELD 50MM/MIN	DIN EN ISO 527-2	%	2
ELONGATION AT BREAK 50MM/MIN	DIN EN ISO 527-2	%	2
FLEXURAL STRENGTH 2MM/MIN, 10 N <sup>2)</sup>	DIN EN ISO 178	MPA	145
MODULUS OF ELASTICITY (FLEXURAL TEST) 2 MM/MIN, 10 N	DIN EN ISO 178	MPA	6600
COMPRESSION STRENGTH 1% - 2% - 5% 5MM/MIN, 10 N <sup>3)</sup>	EN ISO 604	MPA	21/41/105
COMPRESSION MODULUS 5MM/MIN, 10 N <sup>4)</sup>	EN ISO 604	MPA	4600
IMPACT STRENGTH (CHARPY) MAX. 7,5 <sup>5)</sup>	DIN EN ISO 179-1EU	KJ/M <sup>2</sup>	24
BALL INDENTATION HARDNESS <sup>6)</sup>	ISO 2039-1	MPA	343

THERMAL PROPERTIES			
GLASS TRANSITION TEMPERATURE <sup>7)</sup>	DIN EN ISO 11357	°C	93
MELTING TEMPERATURE	DIN EN ISO 11357	°C	280
SERVICE TEMPERATURE SHORT TERM <sup>8)</sup>		°C	260
SERVICE TEMPERATURE LONG TERM		°C	230
THERMAL EXPANSION (CLTE) 23-60° C – LONG.	DIN EN ISO 11359-1;2	10 <sup>-5</sup> K <sup>-1</sup>	4
THERMAL EXPANSION (CLTE) 23-100° C – LONG.	DIN EN ISO 11359-1;2	10 <sup>-5</sup> K <sup>-1</sup>	5
THERMAL EXPANSION (CLTE) 100-150° C – LONG.	DIN EN ISO 11359-1;2	10 <sup>-5</sup> K <sup>-1</sup>	10
SPECIFIC HEAT	ISO 22007-4:2008	J/(G*K)	0.9
THERMAL CONDUCTIVITY	ISO 22007-4:2008	W/(K*M)	0.33

ELECTRICAL PROPERTIES			
SURFACE RESISTIVITY – SILVER ELECTRODE, 23°C, 12% R.H. <sup>9)</sup>	DIN IEC 60093	Ω	10 <sup>14</sup>

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VOLUME RESISTIVITY - SILVER ELECTRODE, 23°C, 12% R.H. <sup>10)</sup>	DIN IEC 60093	$\Omega^*CM$	10 <sup>14</sup>
DIELECTRIC STRENGTH - 23°C, 50% R.H. <sup>11)</sup>	ISO 60243-1	KV/MM	32
RESISTANCE TO TRACKING (CTI) - PLATIN ELECTRODE, 23°C, 50% R.H., SOLVENT A	DIN EN 60112	V	125

MISCELLANEOUS PROPERTIES	TEST METHOD	UNIT	GUIDELINE VALUES
WATER ABSORPTION 24H / 96H (23°C) <sup>12)</sup>	DIN EN ISO 62	%	<0.01 / 0.01
RESISTANCE TO HOT WATER / BASES <sup>13)</sup>	-	-	+
RESISTANCE TO WEATHERING <sup>14)</sup>	-	-	(+)
FLAMMABILITY (UL94) <sup>15)</sup>	DIN IEC 60695-11-10	-	V0

REV.	DATE	DESCRIPTION	MODIFIED PARAGRAPHS	WRITTEN BY	APPROVED BY
01	12/2020	LAYOUT UPDATE	//	602.271	601.271

**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.

- (1) FOR TENSILE TEST: SPECIMEN TYPE 1B
- (2) FOR FLEXURAL TEST: SUPPORT SPAN 64MM, NORM SPECIMEN.
- (3) SPECIMEN 10x10x10MM
- (4) SPECIMEN 10x10x50MM, MODULUS RANGE BETWEEN 0.5 AND 1% COMPRESSION.
- (5) FOR CHARPY TEST: SUPPORT SPAN 64MM, NORM SPECIMEN.
- (6) SPECIMEN IN 4MM THICKNESS
- (7) FOUND IN PUBLIC SOURCES.
- (8) FOUND IN PUBLIC SOURCES. INDIVIDUAL TESTING REGARDING APPLICATION CONDITIONS IS MANDATORY
- (9) SPECIMEN IN 20MM THICKNESS
- (10) DUE TO THE BLACK COLOURANT AND MOISTURE UPTAKE OF THE MATERIAL THE ELECTRICAL INSULATION PROPERTIES CANNOT BE 100% GUARANTEED, DESPITE SINGLE MEASUREMENTS SUGGESTING OTHERWISE.
- (11) SPECIMEN IN 1MM THICKNESS
- (12) Ø CA. 50MM, H=13MM
- (13) + GOOD RESISTANCE
- (14) (+) LIMITED RESISTANCE
- (15) CORRESPONDING MEANS NO LISTING AT UL (YELLOW CARD). THE INFORMATION MIGHT BE TAKEN FROM RESIN, STOCK SHAPE OR ESTIMATION. INDIVIDUAL TESTING REGARDING APPLICATION CONDITIONS IS MANDATORY.

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