

Orbis - 7 Hohenrochsa
11⁴⁰ ; 10⁴⁰

Mo Schriesheim 2002
605483 17¹⁵ 17²⁰

ISOVOLTA
Group

Composite Materials

AIRPREG PY K3245L

Low heat release phenolic prepreg based on an aviation grade carbon fiber for applications in aviation, railway and ship interiors.

CARBON FABRIC	Style	3257	
	weight	197 g/m ²	
	weave	2 x 2 twill	
	fabric	3K / AS4C	
MATRIX	modified phenolic-formaldehyde-resin		
PREPREG	weight	EN 2557	360 ± 15 g/m ²
	resin content	EN 2559	45 ± 3 weight-%
	resin flow	EN 2332	≥ 10 %
	volatile content	EN 2558	< 8 weight-%
	tack		dry to tacky
CURING CONDITIONS	recommended curing conditions		
	temperature	135°C (275°F)	155°C (311°F) 155°C (311°F)
	heating rate	3°C/min (5,4 F/min)	5°C/min (9°F/min) insert in hot mould
	curing time	75 min	30 min 15 min
	pressure	2-7 bar (30-105 psi)	2-7 bar (30-105 psi) 12,5 bar (181 psi)
STORAGE STABILITY	max. 5 months at -18°C plus 15 days at room temperature (max. 30°C and max. 75 % rh) plus 24 hours at room temperature 23°C/50% rh (DINEN 62).		
FLAMMABILITY PROPERTIES	construction: 1 layer laminate		
	FAR 25.853(a) / FAR 25 App.F Pt.I Amdt.83		
	burn length (60 sec)	≤ 150 mm	
	flame time	5 sec	
	drip flame time	no drip	
	FAR 25.853(d) / FAR 25 App.F Pt.V Amdt.83		
	smoke density flaming Ds4	≤ 10	
	FAR 25.853(d) / FAR 25 App.F Pt.IV Amdt.83		
	average peak heat release	≤ 65 kW/m ²	
	average total heat release	≤ 65 kW.min/m ²	

Rev.: 003/ 05-06

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MECHANICAL PROPERTIES (LAMINATE)

construction: 10 layers for a 2 mm Laminate
layup: laminate is made by parallel laminating of prepreg between press-stops of 2 mm

		23°C
* Tensile strength weft direction	EN 2597	> 500 Mpa
* Tensile modulus weft direction	EN 2597	> 50 Gpa
Tensile strength warp direction	EN 2597	> 750 Mpa
Tensile modulus warp direction	EN 2597	> 50 Gpa
Compression strength warp direction	EN 2850 B	> 450 Mpa
Compression strength weft direction	EN 2850 B	> 450 Mpa
** $\pm 45^\circ$ Inplane sheare strength	EN 6031	> 80 MPa
** $\pm 45^\circ$ Inplane sheare modulus	EN 6031	> 1,8 GPa
* Interlaminar shear strength Warp direction	EN 2563	> 30 MPa

* Batch release (quality control testing)

** Construction: 8 layers