

EXEL SKI LAMINATES



TRUSTED COMPOSITE PARTNER FOR FRONT-RUNNERS

Exel Composites has a long history with composites since 1960 when the company was established. Long and successful history with sporting goods includes special composite laminates that we have developed and supplied to leading sport equipment manufacturers since 40 years.

These applications include hockey sticks, skis, snowboards, skateboards, long boards, archery and many more.

BEST MECHANICAL PROPERTIES WITH EXEL LAMINATES

Exel laminates are always a combination of glass- or carbon fibres or/and fabrics and epoxy resins with various layup alternatives, depending on the properties required. With Exel laminates you can adjust the stiffness and weight of the skis.

YOUR BENEFITS:

- Improved mechanical properties and increased lifetime of skis
- Pre-cured laminates are easy to apply
- No wrinkles and 100% correct fiber alignment
- constant quality
- optimized construction
- good stiffness and fatigue properties
- cost effective solution
- Grinded surface gives good adhesion to other components

ALWAYS THE RIGHT PRODUCT TO MEET YOUR NEEDS:

- **U-laminates (U2-0,35mm)**
 - › The most cost-effective laminate to improve your skis' stiffness
- **R-laminates (R2-200-0,50 & 0,60 & 0,80mm)**
 - › The most cost effective way to improve your skis' stiffness and torsional properties
 - › Easy handling of laminates
- **C-laminates (CU2-10C-0,50mm / CU2-33%Carbon-0,35mm)**
 - › The lightest laminates with excellent stiffness
- **XU-laminates (XU2-460 – 0,65mm)**
 - › Exceptional torsional properties

PRODUCT SPECIFICATION

PRODUCT	U2 0,35 mm	R2-200			CU2-10C 0,50 x 40,5 mm	CU2-33% Carbon 0,35 mm	XU2-460 0,65 mm
		0,50 mm	0,60 mm	0,80 mm			
Reinforcements	Unidirectional GF	Unidirectional GF with support fabric			Unidirectional GF and CF	Unidirectional GF and CF	Unidirectional GF with ± 45 fabric
Matrix	EP	EP			EP	EP	EP
Colour	Natural	Natural			Natural	Natural	Natural
Tg	120±5°C	120±5°C			120±5°C	120±5°C	120±5°C

LAMINATE PROPERTIES

Weight	g/m ²	650±70	920±90	1070±90	1500±100	840±80	630±60	1160±120
Thickness	mm	0,35 ±0,05	0,50±0,05	0,60±0,05	0,80±0,05	0,50±0,05	0,35±0,05	0,35±0,05
Fiber content	m-%	73±5	71±5	72±5	74±4	74±4	73±5	68±6
Of carbon	vol-%	N/A	N/A	N/A	N/A	38	33	N/A

MECHANICAL PROPERTIES

Tensile E-modulus (0°)	Gpa	43±6	39±4	42±5	43±5	78±6	66±6	23±6
Tensile strength (0°)	Mpa	1050±150	850±150	900±150	1000±150	1250±200	1200±200	400±100
Tensile E-modulus (90°)	Mpa	N/A	2000±400	1900±300	1500±200	N/A	N/A	7500±1500
Tensile strength (90°)	Mpa	N/A	35±15	30±15	25±10	N/A	N/A	150±50

SURFACES

Top side	Sanded thoroughly. Grit 40 by default, 100 or 150 optional	Sanded thoroughly. Grit 40 by default, 100 or 150 optional			Sanded thoroughly. Grit 40 by default, 100 or 150 optional	Sanded thoroughly. Grit 40 by default, 100 or 150 optional	Sanded thoroughly. Grit 40 by default, 100 or 150 optional
Gluing side	Sanded thoroughly. Grit 40 by default, 100 or 150 optional	Sanded thoroughly. Grit 40 by default, 100 or 150 optional			Sanded thoroughly. Grit 40 by default, 100 or 150 optional	Sanded thoroughly. Grit 40 by default, 100 or 150 optional	Sanded thoroughly. Grit 40 by default, 100 or 150 optional

