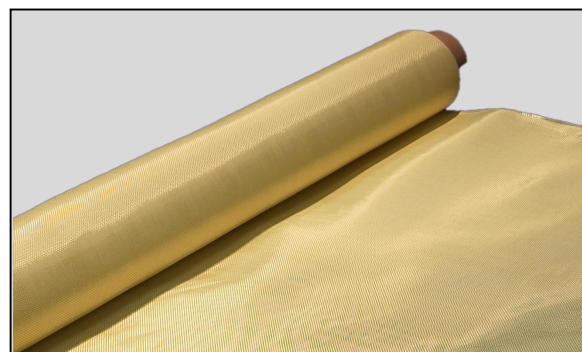


Brand name	LOONG-FLEX™
	SW (Hard Armor / Helmet – Woven Fabric Series)
Product code:	SW-290T
Armor type :	Hard Armor / Ballistic Helmet / Rigid Composite
Construction:	Twill Weave, Single Layer
Application :	Ballistic Helmet Shell / Hard Armor Panel
Manufacturing note:	Optimized for thermoforming & helmet pressing


PHYSICAL & DIMENSIONAL PROPERTIES

Property	Unit	Value
Areal Density	g/m ²	290
Fabric Width	mm	1200
Roll Length	m	150
Fabric Thickness	mm	0.40 ± 0.05
Warp Yarn Density	yarns/10 cm	148 ± 2
Weft Yarn Density	yarns/10 cm	148 ± 2

PHYSICAL & DIMENSIONAL PROPERTIES

Property	Method	Unit	Specification	Typical
Tensile Strength – Warp	ASTM D5035	N/50 mm	≥ 11,069	13,005
Tensile Strength – Weft	ASTM D5035	N/50 mm	≥ 11,069	12,102
Breaking Elongation – Warp	ASTM D5035	%	≥ 4.00	6.86
Breaking Elongation – Weft	ASTM D5035	%	≥ 4.00	4.78
CV of Breaking Strength – Warp	ASTM D5035	%	≤ 7.00	2.51
CV of Breaking Strength –Weft	ASTM D5035	%	≤ 7.00	2.18
Oil Content	ASTM D2257	%	0.8 – 1.5	1.05

BALLISTIC PERFORMANCE DATA

V50 Ballistic Limit (1.1g / 17gr FSP):	515 m/s at 16 layers (raw fabric)
PRIMARY APPLICATION:	Ballistic Helmet Shell / Hard Armor Panel
Thermoset composite performance (phenolic / epoxy) dependent on resin system; end-user lamination qualification required.	

- All values are typical and representative; they are not guaranteed specifications.
- Ballistic performance data are based on internal laboratory testing.
End-user validation testing is strongly recommended.
- Properties may vary depending on processing conditions and laminate configuration.
- Export of ballistic materials may be subject to national and international regulations.