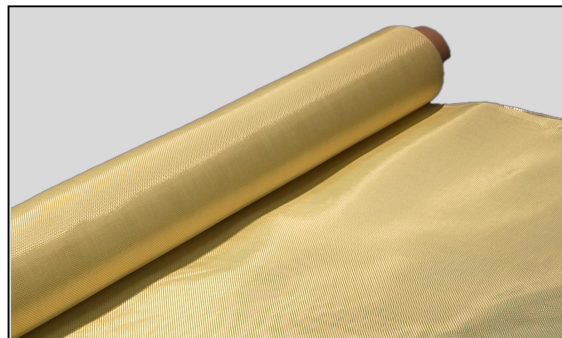


<b>Brand name</b>	<b>LOONG-FLEX™</b> SW (Hard Armor / Helmet – Woven Fabric Series)
<b>Product code:</b>	<b>SW-420T</b>
<b>Armor type :</b>	<b>Hard Armor / Ballistic Helmet / Rigid Composite</b>
<b>Construction:</b>	<b>Twill Weave, Single Layer</b>
<b>Application :</b>	Ballistic Helmet Shell / Hard Armor Panel
<b>Manufacturing note:</b>	superior composite V50 and structural performance


**PHYSICAL & DIMENSIONAL PROPERTIES**

Property	Unit	Value
Areal Density	g/m <sup>2</sup>	420±10
Fabric Width	mm	1300
Roll Length	m	100
Fabric Thickness	mm	0.65± 0.05
Warp Yarn Density	yarns/10 cm	122 ± 2
Weft Yarn Density	yarns/10 cm	120 ± 2

**PHYSICAL & DIMENSIONAL PROPERTIES**

Property	Method	Unit	Specification	Typical
Tensile Strength – Warp	ASTM D5035	N/50 mm	≥ 15,500	16,579
Tensile Strength – Weft	ASTM D5035	N/50 mm	≥ 16,000	16,205
Breaking Elongation – Warp	ASTM D5035	%	≥3.00	7.72
Breaking Elongation – Weft	ASTM D5035	%	≥3.00	6.12
CV of Breaking Strength – Warp	ASTM D5035	%	≤ 7.00	5.57
CV of Breaking Strength –Weft	ASTM D5035	%	≤ 7.00	2.94
Oil Content	ASTM D2257	%	0.8 – 1.5	1.01

**BALLISTIC PERFORMANCE DATA**

<b>V50 Ballistic Limit (1.1g / 17gr FSP):</b>	
Raw fabric:	515 m/s at 12 layers
Phenolic resin plate:	498 m/s at 5 kg/m <sup>2</sup> (11 layers)
<b>PRIMARY APPLICATION:</b>	Ballistic Helmet Shell / Hard Armor Panel / Armored Vehicle
Final composite performance is resin-system and process dependent. End-user system validation 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.