



LIGHTWEIGHT TRANSPARENT ARMOUR FOR MILITARY VEHICLES

SECULAM ST 1

Specially designed for use in military vehicles, Allplast's ST1 laminate provides protection against the 7.62 x 51 NATO round, according to STANAG 4569 level I for transparent armour. This laminate can take 4 consecutive hits with a 120 mm spacing, without creating spall on the inside. As an indication of our high standards, our ST-range products have all been tested at extreme temperatures (-40 degrees to +49 degrees Celsius) to ensure the anti-ballistic performance of our products at extreme conditions. With this additional testing done, these laminates can be confidently used in all thinkable conditions.

Using unique combinations of materials, we created a dependable and lightweight product that will make a difference in vehicle applications where performance and weight are critical.



SECULAM ST 2

With the SecuLam ST², military vehicles can be protected against the armour piercing variant of one of the most infamous bullets, the 7.62 x 39, as used in the popular AK47 assault rifle. This armour piercing bullet has even more penetration power than the standard 7.62 x 39 bullet. To make things even more challenging, the particular bullet used in the ballistic tests also contains incendiary material to inflict additional damage to its target.

Certified according to STANAG 4569 level II 7.62 x 39 API (Armour Piercing Incendiary), this laminate provides multihit performance for extremely demanding applications. This laminate has also been tested for a wide temperature range, making it suitable for many military vehicle applications.

Allplast's SecuLam ST² is lightweight and offers a no-spall protection; special layers prevent fragmentation at the back of the laminate, making it safer for vehicle occupants.



SECULAM ST 3

To offer protection against some of the heaviest firearm threats, Allplast has developed high-performance vehicle glazing according to STANAG 4569 level III. Within this protection level, two ammunition types are defined: 7.62 x 51 NATO AP and 7.62 x 54R Dragunov Armour Piercing. Both bullets are highenergy rifle bullets with armour piercing capabilities. Used in e.g. sniper rifles, these bullets are among the highest firearm threats encountered today. Allplast has developed protective glazing for both ammunition variants and had them additionally tested at extreme temperatures.

SecuLam ST3a offers has been tested against the 7.62 x 54RB3² API Dragunov. SecuLam ST3b is able to withstand the 7.62 x 51 APWC Core-round. In both cases, 4 consecutive impacts in a 120mm-spacing pattern were defeated. Both laminates have additionally proved their reliability during ballistic tests at -40 degrees Celsius.

As with our other ST-laminates, the St3-variants are relatively lightweight and offer a no-spall protection. Special layers prevent fragmentation on both the impact side and the inside of the laminate.



TECHNICAL INFORMATIONS



Seculam ST1

STANAG level 1 (7,6² x 51 NATO Ball)



Seculam ST²

STANAG level 2 (7,6² x 39 API)



Seculam ST3 A

STANAG level 3 (7,6² x 51 API WC)



Seculam ST3 B

STANAG level 3 (7,6² x 54R Dragunov)



TECHNICAL SPECIFICATION

	Protection level	Ammunition type	Composition	Thickness	Specific weight	Options
ST1	STANAG 4569 level 1 No Spall	7,6 ² x 51 NATO Ball	Glass/polymers + interlayers	43 mm	83 Kg/m	Tinting, coating
ST2 *	STANAG 4569 level 2 No Spall	7,6 ² x 39 Armour Piercing Incendiary	Glass/polymers + interlayers	68 mm	130 Kg/m	Tinting, coating
ST3 A **	STANAG 4569 level 3 No Spall	7,6 ² x 54R B3 ² Armour Piercing Incendiary Dragunov	Glass/polymers + interlayers	105 mm	202 Kg/m	Tinting, coating
ST3 B **	STANAG 4569 level 3 No Spall	7,6 ² x 51 NATO Armour Piercing WC core	s Glass/polymers + interlayers	110 mm	224 Kg/m	Tinting, coating

* Tested temperatures: -40°C, +20°C, +49°C

** Tested temperatures: -40°C, +20°C