
ARCLIN
Kevlar
Braver & Stronger
Together with Kevlar®

Helmets and Hard Insert Plates made with Kevlar® and Tensylon®

PROTECTING THOSE WHO PROTECT US

For military war fighters and law enforcement, dodging bullets, shrapnel, and explosions is a regular part of their day. Helmets made with Arclin® Kevlar® and Arclin® Tensylon® have helped save thousands of lives from a range of threats. Helmets and insert plates made with Arclin® materials address the demandingrequirements of a demanding job. They help offer protection against a wide range of threats, including submachine-gun bullets and high velocity fragments. State-of-theartmilitary helmets made with Kevlar® and Tensylon®.

Rigorous impact testing shows helmets made with Kevlar® fiber have superior structural integrity to help enhance survivability in ballistic and non-ballistic impacts. Since helmets made with Kevlar® or Tensylon® for hard armor technology are lightweight, they can help improve mobility and reduce fatigue to give protectors the much-needed energy to complete their mission.

With Kevlar® for hard armor, military and law enforcement personnel can have a lighter-weight helmet in a 100% Kevlar® solution. Kevlar® for hard armor can be processed on existing helmet manufacturing machinery to allow for an easy transition.



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Tensylon®

Tensylon® is a world-class armor solution that offers an optimal balance of performance, weight and cost for multiple end-use applications. Very low back-face deformation to help minimize the injury impact to the wearer. Ideal for use in lightweight helmets.

TENSYLON® FOR HARD ARMOR HELPS PROVIDE

- Ballistic Protection - weight saving, back face deflection, fragmentation, blast.
- Mechanical Strength - flexural strength, ear-to-ear compression, bolt bearing strength.
- Service Life - high/low temperatures, salt water, long exposure performance.
- Easy Processing - manufacturing technology options, broad processing window, co-processable/hybridization.



FORM	DTX	STRUCTURE DESCRIPTION	TYPICAL TO NOMINAL IN CONDITIONED WEIGHT (g/m2)	MERGE/STYLE
K129 Plain Weave Fabric (High Tenacity)	3140 DTX	Heat set Para-aramid	410	258H
K29 Plain Weave Fabric (Standard Tenacity)	3330 DTX	Greige, Scoured Para-aramid	460	745GR/7451S
K129 PrePreg Fabric (High Tenacity)	3140 DTX	Heat Set PrePreg, Double Sided	460/510	HA K510D
Bidirectional Laminate	n/a	2 Ply - UHMWPE for Complex Shapes	110	30A
Bidirectional Laminate	n/a	4 Ply - UHMWPE for Noncomplex Panels	215	40A
Bidirectional Laminate	n/a	4 Ply - UHMWPE for Helmets	205	HA120

SELECTION CRITERIA	KEVLAR® PLAIN WEAVE (STANDARD TENACITY)	KEVLAR® PLAIN WEAVE (HIGH TENACITY)	KEVLAR® PREPREG FABRICS	TENSYLON® BI DIRECTIONAL LAMINATES
Ballistic Protection	✓✓✓	✓✓✓	✓✓✓	✓✓✓✓
Trauma Reduction	✓✓	✓✓✓	✓✓✓✓	✓✓✓✓
Fragment Protection	✓✓	✓✓✓	✓✓✓	✓✓✓✓
Overall Performance to Weight	✓	✓✓	✓✓✓	✓✓✓✓

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ARCLIN® KEVLAR®

Product safety information is available upon request. This information is provided in good faith as technical guidance based on our current product knowledge and may be updated as new information becomes available. It is for experimental purposes only and does not replace independent testing to determine suitability for varied applications. Arclin is unable to anticipate all manufacturing, processing, handling, application or end-use conditions and therefore MAKES NO EXPRESS OR IMPLIED REPRESENTATIONS OR WARRANTIES AND ASSUMES NO LIABILITY IN CONNECTION WITH ANY USE OF THIS INFORMATION. Nothing herein shall be construed as a license or recommendation to infringe any patent or other intellectual property rights.

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