



# UHMWPE SOFT ARMOUR SERIES — CONCISE OVERVIEW

Advanced Protection. Engineered Performance.

## Overview

Artan Protec’s Soft UHMWPE Series provides flexible, drapeable protection with excellent multi-hit energy dispersion. This concise overview lists only the essential data for quick selection.

*Tier key:* AS = Shield (entry) • ASX = Guard (mid) • ASY = Prime (advanced light) • ASZ = Ultra (top tier)

Code		GSM	Series	Build	IIIA .44 (kg/m² • UD)
AS-56	56	Shield	0° + PE film	—	
ASY-56	56	Prime	0° + PE film	—	
ASZ-56	56	Ultra	0° + PE film	—	
ASY-50	50	Prime	2L 0°/90°	4.9 • 87	
ASX-55	55	Guard	2L 0°/90°	5.3 • 96	
AS-150	150	Shield	6L 0°/90°	5.4 • 36	
ASX-150	150	Guard	6L 0°/90°	4.95 • 33	
ASY-150	150	Prime	6L 0°/90°	4.35 • 29	
AS-200	200	Shield	8L 0°/90°	5.4 • 27	
ASZ-200	200	Ultra	8L 0°/90°	4.2 • 21	
AS-300	300	Shield	12L 0°/90°	5.4 • 18	

**Additional threats (NIJ 0101.06):** 9mm — AS-150: 3.9 • 26; ASX-150: 3.75 • 25; AS-200: 3.9 • 20; ASZ-200: 3.2 • 16; AS-300: 3.9 • 13. .357 — ASY-150: 3.6 • 24. “•” = areal density (kg/m²) • number of UD layers.

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## AS-56 SHIELD | SOFT ARMOUR UD

### Overview

Film assisted soft armour sheet for panel consolidation and handling stability. Two 0° UD plies with a sandwiched PE film enable clean lay up and edge integrity.

### Specifications

Parameter	Value
Area Density	56 ± 3 g/m <sup>2</sup>
Thickness	0.08 ± 0.02 mm
Width	1.6 ± 0.01 m
Length	200 m
Construction	2 layer 0° UD + PE film (film between layers)
Matrix	Water soluble PU resin

### Mechanical Properties

Property	Nominal	Test Method
Count	800 ± 80 Denier	GB/T 14343-2008
Count CV	≤ 4 %	—
Tensile Strength	≥ 33.5 cN/dtex	GB/T 19975-2005
Modulus	≥ 1325 cN/dtex	GB/T 19975-2005
Breaking Elongation	≤ 4.0 %	—

### Ballistic Performance

Not specified for this grade (used as consolidation/cover layer within stacks).

### Applications

- Surface/cover ply
- Handling/stability layer

Panel edge sealing • Lamination ready films

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## AS-150 SHIELD | SOFT ARMOUR UD

### Overview

Six ply 0°/90° sheet for dependable IIIA panels with easy handling.

### Specifications

Parameter	Value
Area Density	150 ± 10 g/m <sup>2</sup>
Thickness	0.23 ± 0.02 mm
Width	1.6 ± 0.01 m
Length	100 m
Construction	6 layer 0°/90° UD
Matrix	Thermoplastic resin

### Mechanical Properties

Property	Nominal	Test Method
Count	800 ± 80 Denier	GB/T 14343-2008
Count CV	≤ 4 %	—
Tensile Strength	≥ 33.5 cN/dtex	GB/T 19975-2005
Modulus	≥ 1325 cN/dtex	GB/T 19975-2005
Breaking Elongation	≤ 4.0 %	—

### Ballistic Performance

Threat	Spec	Areal Density (kg/m <sup>2</sup> ) • UD	Standard
IIIA	.44	5.4 • 36	NIJ 0101.06
—	9mm	3.9 • 26	NIJ 0101.06

### Applications

- Soft inserts

Backpack/brief panels • Blankets

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# AS-200 SHIELD | SOFT ARMOUR UD

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## Overview

Robust 8 ply 0°/90° sheet for soft panels, bags, and shields.

## Specifications

Parameter	Value
Area Density	200 ± 10 g/m²
Thickness	0.30 ± 0.02 mm
Width	1.6 ± 0.01 m
Length	100 m
Construction	8 layer 0°/90° UD
Matrix	Thermoplastic resin

## Mechanical Properties

Property	Nominal	Test Method
Count	800 ± 80 Denier	GB/T 14343-2008
Count CV	≤ 4 %	—
Tensile Strength	≥ 33.5 cN/dtex	GB/T 19975-2005
Modulus	≥ 1325 cN/dtex	GB/T 19975-2005
Breaking Elongation	≤ 4.0 %	—

## Ballistic Performance

Threat	Spec	Areal Density (kg/m²) • UD	Standard
IIIA	.44	5.4 • 27	NIJ 0101.06
—	9mm	3.9 • 20	NIJ 0101.06

## Applications

- Robust soft panels
- Bags • Shields

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## AS-300 SHIELD | SOFT ARMOUR UD

### Overview

Twelve ply 0°/90° sheet for thicker packs and blast blankets.

### Specifications

Parameter	Value
Area Density	300 ± 10 g/m <sup>2</sup>
Thickness	0.46 ± 0.02 mm
Width	1.6 ± 0.01 m
Length	100 m
Construction	12 layer 0°/90° UD
Matrix	Thermoplastic resin

### Mechanical Properties

Property	Nominal	Test Method
Count	800 ± 80 Denier	GB/T 14343-2008
Count CV	≤ 4 %	—
Tensile Strength	≥ 33.5 cN/dtex	GB/T 19975-2005
Modulus	≥ 1325 cN/dtex	GB/T 19975-2005
Breaking Elongation	≤ 4.0 %	—

### Ballistic Performance

Threat	Spec	Areal Density (kg/m <sup>2</sup> ) • UD	Standard
IIIA	.44	5.4 • 18	NIJ 0101.06
—	9mm	3.9 • 13	NIJ 0101.06

### Applications

- Thick soft packs

Blast blankets • Flexible barrier panels

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# ASX-55 GUARD | SOFT ARMOUR UD

## Overview

Balanced 0°/90° UD for flexible high layer vests and shields.

## Specifications

Parameter	Value
Area Density	55 ± 10 g/m²
Thickness	0.08 ± 0.02 mm
Width	1.6 ± 0.01 m
Length	150 m
Construction	2 layer 0°/90° UD
Matrix	Thermoplastic resin

## Mechanical Properties

Property	Nominal	Test Method
Count	800 ± 80 Denier	GB/T 14343-2008
Count CV	≤ 4 %	—
Tensile Strength	≥ 36 cN/dtex	GB/T 19975-2005
Modulus	≥ 1400 cN/dtex	GB/T 19975-2005
Breaking Elongation	≤ 4.0 %	—

## Ballistic Performance

Threat	Spec	Areal Density (kg/m²) • UD	Standard
IIIA	.44	5.3 • 96	NIJ 0101.06

## Applications

- High layer flexible vests • Foldable shields

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# ASX-150 GUARD | SOFT ARMOUR UD

## Overview

Premium 6 ply 0°/90° sheet for duty grade inserts and vests.

## Specifications

Parameter	Value
Area Density	150 ± 10 g/m²
Thickness	0.23 ± 0.02 mm
Width	1.6 ± 0.01 m
Length	100 m
Construction	6 layer 0°/90° UD
Matrix	Thermoplastic resin

## Mechanical Properties

Property	Nominal	Test Method
Count	800 ± 80 Denier	GB/T 14343-2008
Count CV	≤ 4 %	—
Tensile Strength	≥ 36 cN/dtex	GB/T 19975-2005
Modulus	≥ 1400 cN/dtex	GB/T 19975-2005
Breaking Elongation	≤ 4.0 %	—

## Ballistic Performance

Threat	Spec	Areal Density (kg/m²) • UD	Standard
IIIA	.44	4.95 • 33	NIJ 0101.06
—	9mm	3.75 • 25	NIJ 0101.06

## Applications

- Premium soft inserts • Duty vests
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## ASY-50 PRIME | SOFT ARMOUR UD

### Overview

Featherweight 0°/90° UD for ultra-light IIIA stacks and ballistic blankets.

### Specifications

Parameter	Value
Area Density	50 ± 10 g/m <sup>2</sup>
Thickness	0.08 ± 0.02 mm
Width	1.6 ± 0.01 m
Length	300 m
Construction	2 layer 0°/90° UD
Matrix	Thermoplastic resin

### Mechanical Properties

Property	Nominal	Test Method
Count	800 ± 80 Denier	GB/T 14343-2008
Count CV	≤ 4 %	—
Tensile Strength	≥ 38 cN/dtex	GB/T 19975-2005
Modulus	≥ 1450 cN/dtex	GB/T 19975-2005
Breaking Elongation	≤ 4.0 %	—

### Ballistic Performance

Threat	Spec	Areal Density (kg/m <sup>2</sup> ) • UD	Standard
IIIA	.44	4.9 • 87	NIJ 0101.06

### Applications

- Lightweight vest packs
- Blankets • Flexible paneling

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# ASY-56 PRIME | SOFT ARMOUR UD

## Overview

Premium film assisted cover layer for soft armour stacks where minimal mass and clean finish are required.

## Specifications

Parameter	Value
Area Density	56 ± 3 g/m²
Thickness	0.08 ± 0.02 mm
Width	1.6 ± 0.01 m
Length	200 m
Construction	2 layer 0° UD + PE film (film between layers)
Matrix	Water soluble PU resin

## Mechanical Properties

Property	Nominal	Test Method
Count	800 ± 80 Denier	GB/T 14343-2008
Count CV	≤ 4 %	—
Tensile Strength	≥ 38 cN/dtex	GB/T 19975-2005
Modulus	≥ 1450 cN/dtex	GB/T 19975-2005
Breaking Elongation	≤ 4.0 %	—

## Ballistic Performance

Not specified for this grade (used as consolidation/cover layer within stacks).

## Applications

- Premium consolidation/cover layer
- Low mass finishing ply



# ASY-150 PRIME | SOFT ARMOUR UD

## Overview

Lightweight 6 ply 0°/90° with advanced fibre modulus for slim IIIA packs.

## Specifications

Parameter	Value
Area Density	150 ± 10 g/m²
Thickness	0.22 ± 0.02 mm
Width	1.6 ± 0.01 m
Length	100 m
Construction	6 layer 0°/90° UD
Matrix	Thermoplastic resin

## Mechanical Properties

Property	Nominal	Test Method
Count	800 ± 80 Denier	GB/T 14343-2008
Count CV	≤ 4 %	—
Tensile Strength	≥ 38 cN/dtex	GB/T 19975-2005
Modulus	≥ 1450 cN/dtex	GB/T 19975-2005
Breaking Elongation	≤ 4.0 %	—

## Ballistic Performance

Threat	Spec	Areal Density (kg/m²) • UD	Standard
IIIA	.44	4.35 • 29	NIJ 0101.06
—	.357	3.6 • 24	NIJ 0101.06

## Applications

- Lightweight IIIA vest packs • Slim soft inserts



## ASZ-56 ULTRA | SOFT ARMOUR UD

Advanced Protection. Engineered Performance.

### Overview

Elite film assisted cover layer to stabilise top-tier stacks with minimal print through.

### Specifications

Parameter	Value
Area Density	56 ± 3 g/m <sup>2</sup>
Thickness	0.08 ± 0.02 mm
Width	1.6 ± 0.01 m
Length	200 m
Construction	2 layer 0° UD + PE film (film between layers)
Matrix	Water soluble PU resin

### Mechanical Properties

Property	Nominal	Test Method
Count	800 ± 80 Denier	GB/T 14343-2008
Count CV	≤ 4 %	—
Tensile Strength	≥ 40 cN/dtex	GB/T 19975-2005
Modulus	≥ 1580 cN/dtex	GB/T 19975-2005
Breaking Elongation	≤ 4.0 %	—

### Ballistic Performance

Not specified for this grade (used as consolidation/cover layer within stacks).

### Applications

- Elite consolidation/cover ply
- Low print through finishing



# ASZ-200 ULTRA | SOFT ARMOUR UD

## Overview

Top-end 8 ply 0°/90° with highest modulus for slim, high performance packs.

## Specifications

Parameter	Value
Area Density	200 ± 10 g/m²
Thickness	0.30 ± 0.02 mm
Width	1.6 ± 0.01 m
Length	100 m
Construction	8 layer 0°/90° UD
Matrix	Thermoplastic resin

## Mechanical Properties

Property	Nominal	Test Method
Count	800 ± 80 Denier	GB/T 14343-2008
Count CV	≤ 4 %	—
Tensile Strength	≥ 40 cN/dtex	GB/T 19975-2005
Modulus	≥ 1580 cN/dtex	GB/T 19975-2005
Breaking Elongation	≤ 4.0 %	—

## Ballistic Performance

Threat	Spec	Areal Density (kg/m²) • UD	Standard
IIIA	.44	4.2 • 21	NIJ 0101.06
—	9mm	3.2 • 16	NIJ 0101.06

## Applications

- Top end soft inserts • Slim high performance packs