

TAPE YARN AND MONOFILAMENT YARN

Product Differences and Uses



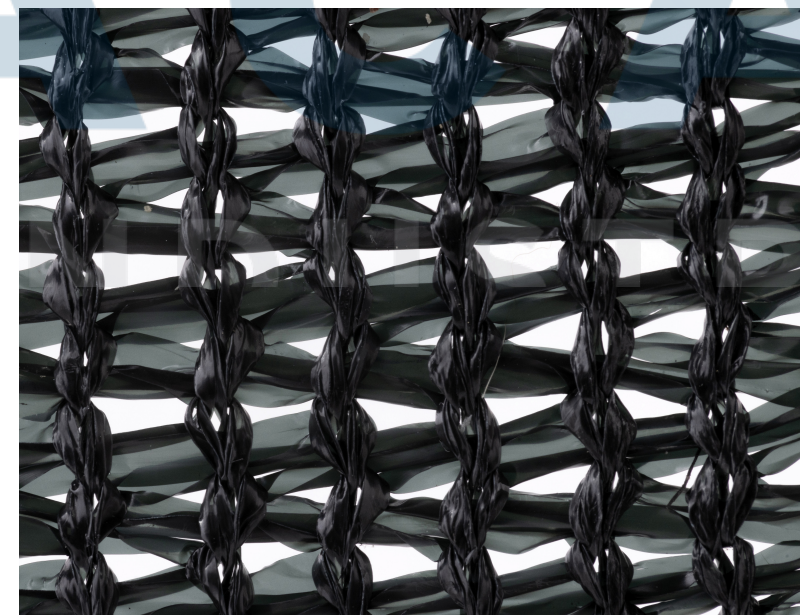
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TAPE vs MONOFILAMENT

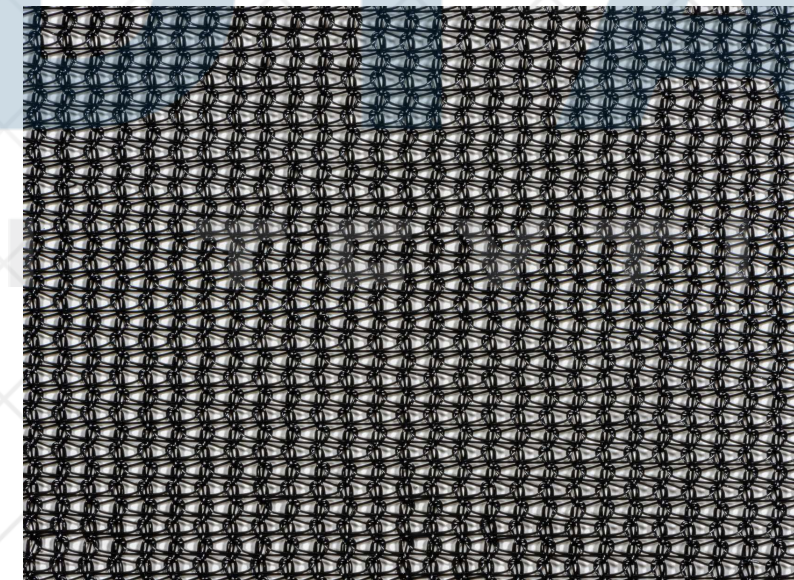
IS THERE A DIFFERENCE?

To make thread, raw, High Density Polyethylene or Polypropylene pellets are heated to their melting point and pushed through an extrusion machine. This machine shapes the melted resin into monofilament or tape thread. The thread is pulled, heated and cooled to achieve its target strength. Once the thread is made, it is moved to the looms for weaving and/or knitting.

THE RESULTING PRODUCT:



Tape Yarn



Monofilament

YARN COMPARISON

	Tape Yarn	Monofilament Yarn
Shape	Flat, like clear tape	Round, like fishing line
Shade	Above 90% shade is possible	Above 70% shade is difficult
Strength	Lower Strength	Higher Strength
Yarns per Inch	Fewer yarns per inch	More yarns per inch
UV Damage	More susceptible	Less susceptible
Cost Value	Value Priced	Can be more than double
Uses	Privacy/Sight Barriers, Temporary Fencing, Throw away Tarps, Shade Structures	Truck covers, Containments, Sandblasting, Shade, Filtration
Light Pathway to Crops	Can cause light diffusion, uneven light across crops	Light through a single yarn is more likely to evenly spread across crop

SHADE COMPARISON

For roughly the same amount of shade, Mono-knit can be twice the cost of Tape knit. Why?

Characteristics	80% Mono	87% Tape - Tape
Weight	278 grams/m ²	142 grams/m ²
Shade Factor	80%	87%
Burst Strength	367 psi	272 psi
Tear Strength	Warp: 151 lbf Weft: 66 lbf	Warp: 52 lbf Weft: 37 lbf
Air Flow	18,920 m ³ /hr/m ²	7,645 m ³ /hr/m ²

Heavier

Lighter and Less Fabric for Similar Shade

Stronger

Tape Yarn is FLAT therefore it:

- creates more shade per square inch;
- has a greater surface area per square inch allowing for more UV exposure (adding extra UV additive can prevent this).

Mono Yarn is ROUND therefore it:

- requires more yarn per square inch;
- has less surface area so less UV exposure (it still requires some UV additive to ensure a long life).
- Some mills can't produce over 70% shade.

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Tape knit

Tape's lighter weight makes it more suitable for installation parallel to the ground, when uneven lightflow is acceptable. It is also easily hung along fencing. Common uses are:

- Improve aesthetic; Block off construction area from view
- Advertising space
- Shade and Privacy screening at schools, on patios or other locations



Mono-Knit

Mono's greater strength and increased air flow make it perfect for perpendicular installation and heavy duty installation. Common uses are:

- Sports Netting: Block high velocity balls or paintballs
- Truck Cover
- Filter within water ways
- Shades crops when precise light transmission to plants is preferred
- Shade factors from 30%-70% to meet needs of specific plants

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