

Technical data sheet · Hi-Shrink Tape

212HT Hi-Shrink Tape

180°C

356°F use temperature

A flexible ETFE / nylon / ETFE film for the cure window polyester can't reach and the shapes it can't follow. Naturally releasing; 300% elongation.

Typical properties

Material	ETFE / nylon / ETFE
Thickness	0.002 in · 0.050 mm
Use temperature	356°F · 180°C
MD shrink	12 %
Shrink force	1.65 lb/in
Peak force at	≈ 180°F · 82°C
Max wrapping tension	10 lb/in
Elongation	≈ 300 %
Release	Natural — no coating
Color	Opaque yellow
Widths · cores	0.5 – 2.5 in · 1.5 / 3.0 in
Shelf life	Indefinite, stored cool and dry

Resin systems

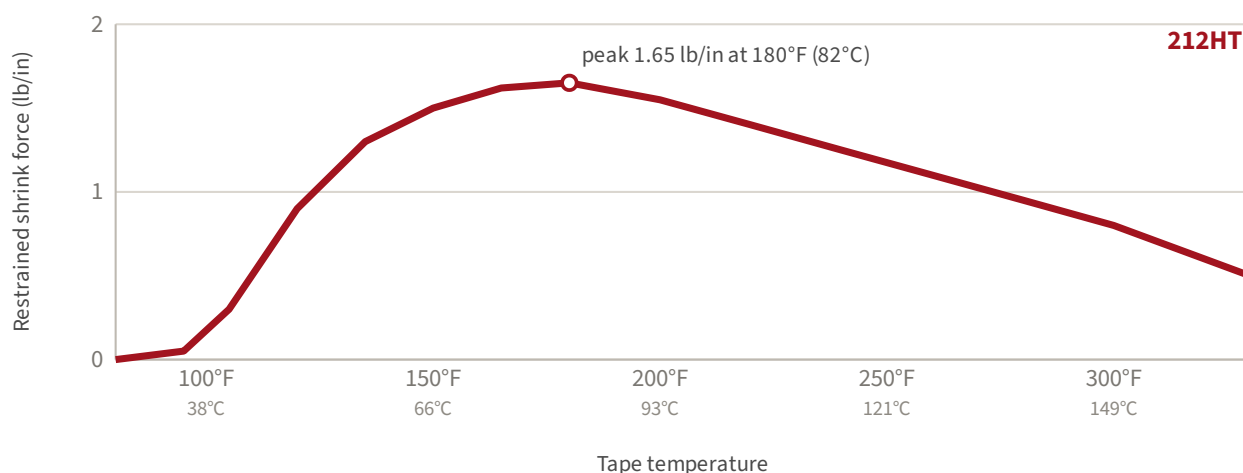
Resin	Typical cure	Fit
BMI (bismaleimide)	~177 – 230°C	212HT to a 180°C peak; above that, X Series
High-temperature epoxy	~150 – 180°C	212HT where an excursion above 165°C is possible
Phenolic	~150 – 200°C	212HT at the low end; X above
Cyanate ester · benzoxazine	177°C and up	Usually exceeds 180°C — X Series

Where it sits in the line

Tape	Max temp	Force lb/in	Choose it for
220R	165°C	8 . 59	Force and configurability below 165°C
212HT	180°C	1 . 65	165–180°C · complex shapes · bond-critical surfaces
208X	400°C	8 . 9	Above 180°C, with polyester-level force

Restrained shrink force – 212HT

traced from published datasheet curve · full restraint · zero pre-tension



ETFE's force peaks early and eases as the film approaches its temperature limit. Size the wrap for the force available at your dwell temperature,

What it is

A 2 mil three-layer fluoropolymer film with a nylon core. ETFE gives it a naturally releasing surface that transfers nothing to a bond-critical part and a service temperature to 180°C; the multilayer construction gives it the elongation to wrap radii, transitions, and non-uniform sections a stiff polyester would bridge or tear on. It shares the 2 mil / 12% specification of a 212 polyester and nothing else.

Best for

- Thermoset cures between 165°C and 180°C — many BMI cycles
- Complex shapes, sharp corner radii, non-uniform sections
- Bond-critical surfaces where no coating transfer is acceptable
- Wrapping over hard tooling and silicone intensifiers

Not for

- **Compaction force** — 1.65 lb/in is a fifth of a 220S
- Cures above 180°C, including brief excursions — X Series
- Anything below 165°C where polyester does the job
- Applications that need a clear or colored film

How to wrap it

- Wrap tension is the lever here — up to 10 lb/in on rigid tooling, lighter on thin walls
- Start at 50% overlap; increase to 66.7% or 75% for more compaction
- Apply with enough tension to seat the film into radii and transitions
- For real compaction at 170°C, pair a hard tool and intensifier with a polyester wrap

Naturally releasing

No coating means nothing to transfer. 212HT releases cleanly from epoxy, BMI, and most thermoset systems without a separate release film, and leaves a surface ready for bonding.

Don't see your configuration?

Custom widths, lengths, and cores are routine — up to 8,000 m on a traverse-wound spool. If the product you need isn't listed, tell us about the application; we would rather talk it through and find out whether we can make it than let you settle for something close.

Compaction pressure: the five levers

Lever	What it does
1 Tape	Material, thickness, and shrink % set the force per inch of width
2 Wrap tension	Typically 5–10 lb/in; stay at or below the SKU maximum — above it the film elongates at application and delivers less at cure
3 Overlap	Layers over each point: 50% = 2, 66.7% = 3, 75% = 4, 87.5% = 8. Use values that give a whole number everywhere
4 Diameter	Fixed by the part. Pressure $\approx$ layers $\times$ force $\div$ radius — double the diameter, half the pressure
5 Shrink %	And thickness — within polyester, the lever to reach for before changing series

Ordering, samples, and engineering support

Complimentary samples of any in-stock product — shrinktape.com or (440) 505-7640. Application engineering is available for selection, trials, and troubleshooting — sales engineers work with your process engineers, on site where it helps.

Widths 0.5 – 2.5 in in 0.25 in steps · cores 1.5 or 3.0 in ID · handheld rolls 100 yd · flat-pad rolls 750 yd (about 9 in diameter), and flat pads to about 12 in diameter on a 3 in core, length depending on film thickness · traverse-wound spools to 8,000 m · release coat facing outward unless specified (R = OD, I = ID).

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