

What Is Low Melting Polyamide?

Understanding Durafil Tex 40 Heat Fusible Blind Hem Yarn

Technical Reference Document

1. Chemical Composition

Durafil Tex 40 Heat Fusible Blind Hem Yarn is manufactured from low melting polyamide polymer.

Low melting polyamides are specialty nylon-based copolymers engineered to soften and flow at significantly lower temperatures than conventional standard nylons.

This allows the material to function as a heat-activated bonding yarn within textile constructions.

Because of this engineered chemistry, materials made from low melting polyamide behave very differently from common sewing yarn materials such as polyester or standard nylon.

2. Structure of the Yarn

Durafil Tex 40 Heat Fusible Blind Hem Yarn is produced as a textile yarn suitable for sewing integration, specifically for blind hem reinforcement applications.

The yarn is designed to:

- Run through sewing systems
- Remain stable during normal sewing conditions
- Soften during later pressing stage
- Create controlled internal bonding between textile layers

This combination of sewing functionality and later bonding behaviour makes it a specialised performance yarn.

3. Thermal Behaviour

One of the most distinctive properties of low melting polyamide is controlled softening under moderate heat.

Durafil Tex 40 Heat Fusible Blind Hem Yarn is engineered to activate at approximately:

85°C

At suitable process conditions, the polymer softens and bonds adjacent textile surfaces.

Higher effective temperatures may increase bonding speed, depending on:

- Fabric thickness
- Pressure
- Contact area
- Dwell time

- Heat transfer efficiency

Because of this behaviour, the yarn can convert heat into internal structure within garment hems.

4. Bonding Mechanism

When heated under pressure:

- The polymer softens
- Surfaces contact surrounding fibres or layers
- Cooling helps lock the bonded structure in place

This allows the yarn to function as an internal reinforcement element rather than a visible adhesive layer.

5. Why Low Activation Temperature Matters

A moderate activation temperature offers important textile advantages:

- Lower risk of fabric heat damage
- Compatibility with common pressing systems
- Easier integration into garment finishing

- Reduced need for aggressive heat conditions
- Practical use on many trouser and uniform fabrics

This makes the material suitable for blind hem reinforcement applications.

6. Behaviour Compared with Standard Yarns

Unlike standard polyester or nylon sewing yarns, low melting polyamide yarn is designed to transform during production.

Standard yarns mainly provide mechanical stitch holding.

Durafil Tex 40 Heat Fusible Blind Hem Yarn additionally provides:

- Internal bonding
 - Seam stabilisation
 - Support against slippage
 - Improved post-press structural integrity
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7. Typical Industrial Applications of Low Melting Polyamide

Materials based on low melting polyamide are commonly used in:

- Bonding yarns
- Seam reinforcement systems
- Footwear construction
- Technical textiles
- Lamination support
- Garment stabilisation systems

Durafil Tex 40 is specifically optimised for blind hem applications.

8. Key Material Characteristics

Low melting polyamide yarns typically provide:

- Controlled heat activation
- Bonding capability
- Flexibility in textile systems
- Resistance to normal garment use conditions after bonding
- Compatibility with many woven constructions

These characteristics make them valuable where discreet internal reinforcement is required.

9. Why Durafil Tex 40 for Blind Hems

Blind hems are visually clean but often structurally sensitive.

Durafil Tex 40 Heat Fusible Blind Hem Yarn is engineered to help improve:

- Hem stability after washing
- Flatter hem appearance
- Reduced seam movement
- Greater production consistency

without changing external garment appearance.

10. Contact for Technical Support

For technical queries:

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