

Technical Data Sheet

Durafil Heat Soluble Yarn

150 Denier | Approx. 70°C Melting Point | Natural Colour

1. Product Description

Durafil Heat Soluble Yarn is a low temperature melting functional yarn designed for temporary separation, spacing, support, and removable process structures in weaving, knitting, hosiery, and technical textile manufacturing.

The yarn is primarily used as a **separation yarn**, where two layers, sections, components, or surfaces must remain temporarily divided during production and later separated through controlled heat processing.

When exposed to suitable heat, the yarn softens and melts, allowing the temporary connection or spacing element to disappear.

This enables efficient production of complex constructions that may be difficult, slow, or impossible using conventional permanent yarn systems.

2. Key Characteristics

- Low temperature melting at approximately **70°C**
- Suitable for temporary removable yarn systems

- Designed as separation yarn for knitting and weaving
 - Can simplify complex production processes
 - Useful in hosiery and multi-layer constructions
 - Helps reduce manual separation operations
 - Compatible with selected textile finishing processes
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3. Typical Applications

A. Socks / Hosiery Separation Yarn

Used in sock knitting where paired socks or joined components are temporarily connected during knitting, then separated later by heat.

Examples:

- Paired sock production
- Toe or cuff linked temporary joins
- Multi-piece hosiery handling efficiency

B. Double Layer Knitted Structures

Used to temporarily separate or connect dual-layer knitted constructions during manufacturing.

C. Spacer Constructions

Used to create temporary spacing zones later removed after processing.

D. Weaving Separation Systems

Used where temporary layer division or removable support is required in woven structures.

E. Roll Handling / Continuous Production Joins

Used for temporary joins during continuous manufacturing.

F. Technical Textile Manufacturing

Used in removable support zones or sacrificial yarn constructions.

G. Garment Component Bundling

Used for temporary joining of matched parts for later easy separation.

4. Technical Specification

Property	Typical Value
Product Name	Durafil Heat Soluble Yarn
Material	Low Temperature Melting Synthetic Polymer
Yarn Size	150 Denier
Colour	Natural
Nominal Melting Point	Approx. 70°C
Softening Range	Approx. 65–75°C
Construction	Continuous filament functional yarn
Primary Function	Temporary separation / removable process yarn
Supply Form	Cone / package

5. Functional Principle

The yarn performs as a normal process yarn during knitting or weaving.

When later exposed to suitable heat:

- Yarn softens

- Tensile strength collapses
 - Yarn melts or breaks down
 - Connected sections separate
 - Temporary structure disappears
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6. Processing Guidelines

Recommended trial conditions must be established by user.

Typical use method:

1. Introduce yarn in designed separation zone.
2. Complete knitting / weaving / assembly process.
3. Apply controlled heat through suitable process.
4. Confirm clean separation.
5. Approve settings before bulk production.

Variables affecting result:

- Temperature achieved in yarn zone
- Exposure time
- Yarn tension in structure
- Number of yarn ends used

- Fabric density
 - Heat transfer efficiency
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7. Fabric / Process Compatibility

Suitable for trials in:

- Sock knitting
- Hosiery manufacturing
- Circular knitting
- Flat knitting
- Double-layer knit structures
- Woven temporary structures
- Technical textiles

Always conduct pre-production trials, especially on heat-sensitive fibres.

8. Storage & Handling

- Store in cool, dry conditions
- Keep away from direct heat sources
- Protect from dust and contamination
- Keep packaging closed when not in use
- Rotate stock using first-in, first-out principle

Recommended storage temperature: below 30°C where practical.

9. Important Notes

This product is designed for temporary removable yarn functions through controlled thermal melting.

Final performance depends on fabric design, machine setup, heat method, and process control.

Users are responsible for testing, process adjustment, and validation before bulk production.

10. Packaging Options

Available subject to order quantity:

- Industrial cones
 - Hosiery packages
 - Custom winding formats
 - OEM / private label supply
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11. Contact for Technical Support

For technical queries:

Email: info@durafil-group.com