

Application Notes

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, removable joins, and sacrificial process structures in knitting, weaving, hosiery, and technical textile manufacturing.

The yarn is primarily used as a **separation yarn**, where sections need to remain temporarily connected or divided during production and later separated through controlled heat processing.

When suitable heat is applied, the yarn softens and melts, allowing the temporary yarn element to disappear.

This can improve manufacturing efficiency, simplify handling, and reduce manual separation operations.

2. Main Functional Uses

The yarn is primarily used for:

- Separation yarn in sock and hosiery production
 - Temporary joining yarn between components
 - Spacer yarn for removable gaps
 - Temporary support yarn in knit or woven systems
 - Sacrificial yarn for engineered constructions
 - Handling yarn for continuous production flow
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3. Typical Applications

A. Socks / Hosiery Production

Used to temporarily connect paired socks or knitted units for easier handling, later separated by heat.

Examples:

- Pair linking during knitting
- Temporary cuff joins
- Multi-piece hosiery management

B. Double Layer Knits

Used between two knitted layers where temporary separation or later opening is required.

C. Spacer Structures

Used to maintain temporary distance between layers or zones during manufacture.

D. Weaving Separation Uses

Used in woven constructions requiring removable divisions, temporary joins, or sacrificial support.

E. Technical Textiles

Used where a removable yarn path or temporary support function is beneficial.

F. Component Bundling

Used to temporarily connect matched textile parts for downstream handling.

4. Key Benefits

- Low temperature removable yarn function
- Helps simplify separation operations
- Can reduce manual cutting or splitting labour

- Supports continuous production efficiency
 - Useful for hosiery and complex constructions
 - Can enable innovative textile structures
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5. Recommended Use Method

1. Introduce Durafil Heat Soluble Yarn into designed separation or temporary join area.
 2. Complete knitting, weaving, or handling process.
 3. Apply controlled heat through suitable finishing or thermal process.
 4. Yarn melts / separates / disappears.
 5. Confirm clean result before packing or next process stage.
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6. Typical Heat Sources

Depending on process:

- Steam setting systems
- Dry heat chambers

- Tunnel finishing
- Controlled ironing or pressing
- Heated air systems
- Other suitable thermal equipment

Trials are essential.

7. Common User Sectors

- Sock manufacturers
- Hosiery producers
- Circular knit factories
- Flat knit producers
- Weaving mills
- Technical textile manufacturers
- Innovation textile developers

8. Important Process Variables

Performance depends on:

- Yarn placement in construction
 - Temperature reached in yarn zone
 - Exposure time
 - Number of yarn ends used
 - Fabric density
 - Heat transfer efficiency
 - Operator handling
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9. Important Cautions

- Always run trials before production.
- Confirm surrounding fibres tolerate heat process.
- Excessive heat may damage sensitive materials.
- Incomplete heating may leave residual yarn.
- Different constructions may require different settings.
- Avoid unnecessary yarn usage where simpler design is possible.

10. Important Note

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

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

11. Contact for Technical Support

For technical queries:

Email: info@durafil-group.com