Troubleshooting & Performance Guide

Durafil Heat Fusible Yarn

Tex 40 | Low Melting Polyamide | Natural Colour

1. Purpose

This guide helps users optimise rewinding performance, sewing behaviour, bonding results, and final product quality when using Durafil Heat Fusible Yarn.

The product is designed to provide reinforcement, bonding support, and stabilisation through controlled heat activation.

Because final performance depends on yarn handling, construction design, heat conditions, and operator discipline, controlled trials are strongly recommended before bulk production.

2. Common Performance Issues and Corrective Actions

Issue	Likely Cause	Corrective Action
Weak bond strength	Insufficient heat or dwell time	Increase settings gradually

Uneven bonding	Poor pressure contact or inconsistent placement	Improve pressure consistency and yarn positioning
Visible bond line	Excessive heat, pressure, or surface flow	Reduce settings and retest
Material shine / marking	Overheating sensitive substrate	Lower temperature or protect surface
Excess stiffness	Too much yarn or over-activation	Reduce yarn usage or heat intensity
Sewing thread breaks	Excess tension or friction	Reduce tension, clean guides, review speed
Rewinding package collapse	Poor winding density or tension imbalance	Correct winding parameters
Bond failure after use	Incomplete activation or wrong application design	Improve bonding process and construction logic

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3. Rewinding Performance Guidance

Best practice:

- Use smooth yarn path.
- Maintain controlled winding tension.
- Avoid friction heat during rewinding.
- Check package build quality.

- Confirm unwind stability before shipment or use.

Poor rewinding can reduce downstream sewing performance.

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4. Sewing Performance Guidance

For best results:

- Use yarn only where bonding or reinforcement is needed.
- Maintain balanced machine tensions.
- Avoid excessive speed if heat buildup occurs.
- Confirm stitch consistency before activation.
- Keep thread path clean and smooth.

The yarn is a functional specialty yarn, not a general-purpose thread.

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5. Heat Activation Performance Guidance

Bonding performance depends on:

- Temperature achieved in bonding zone

- Exposure time
- Pressure applied
- Material thickness
- Surface composition
- Cooling stability after activation

Small controlled changes are preferred over large adjustments.

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6. Material Compatibility Considerations

Always trial first on:

- Heat-sensitive fabrics
- Coated materials
- Laminated materials
- Thick multilayer products
- Delicate visible surfaces
- Non-textile substrates

Different materials respond differently to heat and pressure.

7. Productivity Risks

Common avoidable losses include:

- Rework due to weak bond
- Surface marking claims
- Inconsistent package running
- Excess yarn consumption
- Repeated heat cycles
- Production delays from poor settings

Approved standard conditions help reduce these risks.

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8. Process Discipline Checklist

Before bulk production:

- Confirm package quality
- Confirm approved application design
- Trial sewing completed
- Trial bonding completed
- Appearance approved
- Strength approved

- Standard settings recorded

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9. Performance Optimisation Principles

For highest consistency:

- Use only required yarn quantity
- Keep settings stable
- Train operators
- Inspect first production pieces
- Allow cooling before handling
- Record successful conditions by material type

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10. Important Note

Final performance depends on construction design, substrate type, heat method, machine settings, operator discipline, 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