Rewinding & Lubrication Guidelines For Thread Makers

Water Soluble Sewing Thread – PVA Staple Fibre

Ne 40/2 – 2.5 kg Industrial Package

1. General Processing Characteristics

- Spun PVA staple fibre yarn
- Heat-sensitive
- Friction-sensitive
- Hygroscopic

Process control during rewinding and lubrication directly influences sewing performance.

2. Rewinding Parameters

2.1 Winding Speed

- Maximum recommended: ≤ 600 m/min
- Excessive speed increases friction heat
- Monitor yarn surface temperature

2.2 Tension Control

- Maintain low and stable tension
- Avoid sudden tension spikes
- Ensure tension devices are clean and calibrated

2.3 Yarn Path

- Ensure smooth yarn path
- Avoid sharp or damaged guides
- Prevent friction hotspots
- Clean guides regularly

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3. Lubrication for Sewing Performance

Lubrication is critical to improve sewability and control needle heat.

3.1 Purpose

Proper lubrication:

- Reduces needle temperature
- Reduces friction at the needle eye
- Improves stitch consistency

- Reduces breakage during high-speed sewing

Needle heat is a primary failure risk for PVA yarn.

3.2 Lubricant Requirement

Lubricant must be:

- A non-water-based sewing thread emulsion
- Thermally stable
- Compatible with water-soluble thread applications

Water-based lubricant systems must not be used.

The lubricant must not:

- Prematurely affect yarn integrity
- Create hydrophobic barriers preventing dissolution
- Leave residue after washing

3.3 Application Control

- Apply uniformly
- Avoid over-lubrication
- Monitor pickup percentage
- Validate dissolution performance after lubrication

Excess lubricant may:

- Delay dissolution
- Cause residue
- Affect downstream wash results

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4. Environmental Conditions During Processing

- Recommended ambient RH: 50–65%
- Avoid high humidity processing
- Allow yarn to equilibrate before rewinding

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5. Quality Monitoring

During rewinding and lubrication, monitor:

- Yarn break frequency
- Yarn surface temperature
- Lubricant pickup consistency
- Sewing trial performance

6. Validation Requirement

Thread maker must validate:

- Sewing speed compatibility
- Needle heat behaviour
- Dissolution performance after lubrication

Production release should only follow successful trials.

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7. Disclaimer

Processing performance depends on machine setup, lubricant system, sewing speed, and fabric application.

Thread maker is responsible for validating suitability under actual production conditions.

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8. Contact for Technical Support

For technical queries:

Email: info@durafil-group.com