TUSI HAYTHAM BIO LIMITED
Chemistry for a Greener Planet

# Technical Data Sheet

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**LEVINEX™ Series – LEVINEX™ AR-300**

**Acrylic Retarder – Retards Dye Take-Up Percentage for Acrylic Dyeing**
**Manufacturer: *Tusi Haytham Bio Limited***

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**Product Description:**

**LEVINEX™ AR-300 is a high-performance acrylic retarder designed to regulate the dye uptake rate in acrylic and acrylic-blend dyeing processes.**
**It slows the absorption of cationic dyes, ensuring excellent levelness, shade uniformity, and penetration while preventing patchy or uneven dyeing.**
**This product enhances dyeing control, reproducibility, and the overall finish quality of acrylic fabrics.**

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**Key Performance Properties:**

- **Controls dye take-up rate to prevent unlevel or blotchy shades.**
- **Promotes uniform dye penetration and shade reproducibility.**
- **Improves levelling and migration of cationic dyes in acrylic fibres.**
- **Ensures smooth and defect-free fabric appearance.**
- **Compatible with most acrylic dyeing auxiliaries and pH buffers.**
- **Effective over a wide range of dyeing conditions.**

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**Typical Properties:**

| Property | Specification |
|---|---|
| Appearance | Clear to pale yellow liquid |
| pH (25 °C) | 5.0 – 7.0 |
| Ionic Nature | Cationic |
| Solubility | Completely soluble in water |
| Stability | Stable under normal dye bath conditions |
| Specific Gravity (25 °C) | 1.00 ± 0.02 |

**Application:**

- **Add LEVINEX™ AR-300 to the dye bath before adding the cationic dye.**
- **Recommended dosage: 0.2 – 1.5 % owf, depending on fabric type and shade depth.**
- **Maintain bath pH at 4.0 – 5.0 using acetic acid.**
- **Start dyeing at 40–50 °C, gradually increasing to 95–100 °C over 30–45 minutes.**
- **Hold for 30–60 minutes to ensure uniform dye penetration and migration.**
- **Compatible with other levelling agents, softeners, and dyeing auxiliaries.**

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**Precautions:**

- **Avoid mixing directly with strong anionic chemicals in concentrated form.**
- **Use protective gloves and goggles when handling.**
- **Ensure adequate ventilation in the work area.**
- **Store tightly sealed to prevent contamination or degradation.**

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**Packing Size:**

**Available in 25 kg, 60 kg, and 120 kg HDPE drums.**

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**Storage:**

- **Store in a cool, dry, and ventilated area below 40 °C.**
- **Keep containers tightly closed when not in use.**
- **Shelf life: 12 months from the date of manufacture in unopened containers.**
- **Refer to the product label for the “Best use before end” date.**

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**Issued by:**

**Tusi Haytham Bio Limited – Technical Division**
**Product: LEVINEX™ Series – LEVINEX™ AR-300**
**Category: Acrylic Retarder**