TUSI HAYTHAM BIO LIMITED
Chemistry for a Greener Planet

Technical Data Sheet

Date 23.10.2025 Version: thbl-01

METACARE™ Series – Metacare FHR 35

Fabric Hardness Reducer

Manufacturer: Tusi Haytham Bio Limited

Product Description:
Metacare FHR 35 is an effective fabric hardness reducer formulated to soften water and improve fabric hand feel by reducing mineral deposits and residual hardness on textiles.
It works by chelating hardness-causing ions such as calcium and magnesium, preventing fabric stiffness and enhancing fabric softness and flexibility.

Key Performance Properties:

- **Effectively reduces fabric hardness.**
- **Chelates calcium (Ca^{2+}), magnesium (Mg^{2+}), and other hardness ions.**
- **Enhances softness and smoothness of finished fabrics.**
- **Prevents scale formation on machinery and fabrics.**
- **Compatible with common textile processing chemicals.**
- **Environmentally friendly and biodegradable formulation.**

Typical Properties:

Property	Specification
Appearance	Clear to pale yellow liquid
pH (25 °C)	6.5 – 8.0
Ionic Nature	Anionic
Water Miscibility	Fully soluble
Stability	Stable across pH 5–9 and temperatures up to 80 °C

Application:

- **Add Metacare FHR 35 during or after washing or finishing to reduce fabric hardness.**
- **Typical dosage: 0.5 – 1.0 g/L depending on water hardness and fabric type.**
- **Can be used in scouring, washing, and finishing processes.**
- **Adjust dosage based on trials for specific process conditions.**

Precautions:

- **Avoid mixing with strong acids or incompatible chemicals.**
- **Use personal protective equipment when handling.**
- **Store in tightly sealed containers to preserve quality.**

Packing Size:

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

Storage:

- **Store in a cool, dry place below 40 °C, away from direct sunlight.**
- **Shelf life of 12 months in original sealed packaging.**
- **“Best use before end” date indicated on the product label.**

Issued by:
Tusi Haytham Bio Limited – Technical Division
Product: METACARE™ Series – Metacare FHR 35
Category: Fabric Hardness Reducer