Continuous dyeing of aramid at atmospheric pressure

97% dye uptake · 50,000 m per day on one line · no shade variation on repeat orders

Aramid is normally dyed in 130–180 °C high-pressure vessels with carrier chemicals. We dye it continuously, at atmospheric pressure.

WHAT IS DIFFERENT

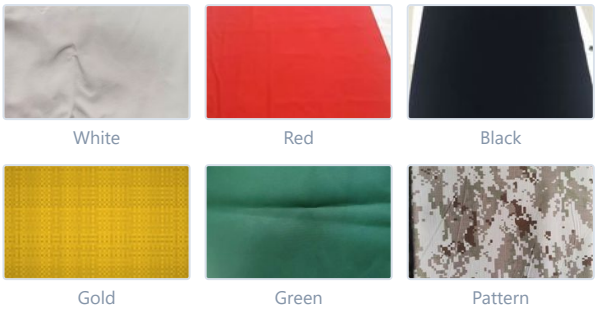
- **Atmospheric pressure, continuous.** No high-pressure vessel and no carrier chemicals — the route the industry uses, and the one regulators are squeezing.
- **Aramid, not polyester.** Single-colour dope-dyed cloth and polyester imitations circulate at a fraction of the price; they are not this product.
- **Multi-colour pattern printing.** On pure 100% aramid and on IIIA blends — dope-dyed fibre is single-colour by nature, so pattern work of this kind is rare worldwide.
- **One line ≈ 15 million metres a year.** Output is not the constraint.

CAPABILITY

Dye uptake	97%
Process	Continuous, atmospheric pressure
Repeat orders	No shade variation
Capacity	50,000 m/day · ~15 million m/year
Colour development	Lab dips to your standard
Formulation	In-house dyestuff and auxiliary system
Substrate	Meta-aramid 1313 — 100% or IIIA (93/5/2), 100–340 gsm

> **Why 97% matters to your cost:** uptake sets how much dyestuff you pay for and how much residual dye must be treated. At 97%, both fall — and shade stays put across batches.

COLOUR RANGE



White · Red · Black · Gold · Green · Pattern

Plain shades and civilian pattern printing — rescue, outdoor and workwear programmes. Developed to your colour standard.

PERFORMANCE AFTER DYEING

Afterflame	0.0 s
Char length	33 mm warp / 29 mm weft
Test basis	Military-standard test — summary under NDA

Continuous atmospheric dyeing protects the fibre, so the flame performance you specified survives the dyeing step.

SUPPLY

Incoterm	EXW only — Xianyang, China
Payment	High-ratio advance (above 65%), negotiable
Pricing	Per project, on colour standard and volume

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LOCATION
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Swatches are production material photographed under workshop lighting; final shade is confirmed by lab dip. Flame data refers to dyed fabric and is summarised — the full test report is available to qualified buyers under a non-disclosure agreement. Patterns shown are civilian. No list price is published; every quotation is prepared individually.