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TECHNICAL DATA SHEET

TDS-ENZ324-EN · REV. 02 · 2026-11-03

Indigo Decolorizing Enzyme for Denim Washing

Indigo decolorizing enzyme that breaks down residual indigo dye on denim after washing.

SKU **ENZ324** CATEGORY **DETERGENT ENZYMES** PHYSICAL FORM **GRANULAR SOLID** COLOR **MIXED COLOR**

Produced by submerged fermentation

Not restricted for transport

OPTIMUM TEMPERATURE	WORKING PH	FORM	APPLICATION RATE
30–35 °C	**6.0–8.0**	**Granular solid**	**1–2%**
working range 20–45 °C	no optimum stated	1 kg sealed bag	based on fabric weight

SPECIFICATION

WORKING WINDOW

Working temperature	**20–45 °C** Typical
Optimal temperature	30–35 °C Typical
Working pH	**6.0–8.0** Typical

PROCESS CONDITIONS

Processing time	5–20 minutes Typical
Optimal processing time	10–20 minutes Typical
Liquor ratio	1:5–20 Typical
Optimal liquor ratio	1:8–15 Typical

IDENTITY

Physical form	Granular solid Typical
Color	Mixed color Typical
Odor	Mild fermentation odor typical of enzyme-based products Typical

Spec = release limit, confirmed on every lot's Certificate of Analysis. **Typical** = normal product behaviour, not a release limit.

STORAGE & PACKAGING

SHELF LIFE
12 months

STORAGE
Sealed container in a cool, dry environment at 2–25 °C; avoid direct sunlight

PACK SIZE
1 kg sealed bag

ORDERING
Online or by e-mail; current price on the product page

APPLICATIONS

Fade denim by removing residual indigo after washing
Creates vintage fade effects without pumice stones

Whiten and clean denim after washing
Gives a cleaner, brighter and more uniform washed appearance

Process rigid and garment-dyed denim styles
Gives controlled indigo removal and visual contrast

Apply directly in denim washing processes
Avoids harsh chemical bleaching agents

DOSAGE

1–2%

% based on fabric weight

Working temperature	**20–45 °C (optimal 30–35 °C)**
Processing time	**5–20 minutes (optimal 10–20 minutes)**
Liquor ratio	**1:5–20 (optimal 1:8–15)**
Working pH	**6.0–8.0**

Determine the optimal application rate through preliminary trials.
Actual parameters may be adjusted according to fabric type, equipment and desired visual effect.

Each lot is released against its specification; the lot Certificate of Analysis reports the measured values.

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Online: enzymes.bio/product/indigo-decolorizing-enzyme-for-denim-washing

Enzyme preparations are proteins and may sensitise; avoid skin, eye and inhalation contact. This technical data sheet gives the product specification and typical values; it is not a batch certificate. A Certificate of Analysis for the supplied lot accompanies each shipment. Safety Data Sheet on request.

SCAN TO ORDER