

CZSD / LONGITUDINAL WATER BLOCKING

Double-sided Non-Conductive Water-Blocking Tape

Laminated polyester nonwoven with swelling powder

polyester nonwoven fabric with polyacrylate swelling powder and corrosion inhibitor.



0.18-0.50 mm
NOMINAL THICKNESS

65-130 g/m²
NOMINAL MASS

6-16 mm
MIN. SWELLING / 3 MIN

Non-conductive
ELECTRICAL TYPE

DRY WATER BLOCKING FOR CABLE CONSTRUCTIONS

Water blocking between cable components.

Polyacrylate powder absorbs incoming water and swells into a gel, helping close internal water paths after sheath damage. The nonwoven wrap also provides bedding and separation. This non-conductive construction is used where a semi-conductive interface is not required.

Typical applications in cable production

Power cable core wrapping

Water blocking and bedding around laid-up cores or beneath sheaths where a non-conductive layer is specified.

Optical fibre and telecom cables

Between core components to limit water migration in dry cable designs. Validate swelling around sensitive elements.

Control and instrumentation cables

Adds a swellable separator or bedding layer where protection from longitudinal water spread is required.

Dry alternatives to flooding compounds

Supports dry cable designs that replace filling or flooding compounds, simplifying handling and termination work.

Material advantages

Swellable barrier

Absorbs incoming water to limit longitudinal movement.

Dry processing

Supports designs without wet flooding compounds.

Bedding and separation

Nonwoven fabric forms an interface between layers.

Non-conductive carrier

For layers where semi-conductivity is not required.

Covered laminate

Covering helps retain swelling powder during handling.

Corrosion inhibitor

Included in this double-sided construction.

CZSD-20 / STOCKED MASTER ROLLS

CZSD-20 is our most commonly supplied construction. We normally hold master rolls in Manchester for fast slitting and spooling, with smaller MOQs. Other grades can be stocked to support agreed customer requirements.

Material properties do not guarantee finished-cable water-blocking performance. Product images are representative.

Technical data

CZSD / Double-sided Non-Conductive Water-Blocking Tape

PROPERTY	UNIT	CZSD-18	CZSD-20	CZSD-25	CZSD-30
Thickness	mm	0.18 ±0.03	0.20 ±0.03	0.25 ±0.03	0.30 ±0.03
Mass per unit area	g/m ²	65 ±10	70 ±10	80 ±10	90 ±10
Min. tensile strength	N/cm	≥20	≥25	≥35	≥40
Min. swelling after 1 min	mm	≥4	≥6	≥8	≥10
Min. swelling after 3 min	mm	≥6	≥9	≥12	≥14

PROPERTY	UNIT	CZSD-35	CZSD-40	CZSD-45	CZSD-50
Thickness	mm	0.35 ±0.03	0.40 ±0.03	0.45 ±0.03	0.50 ±0.03
Mass per unit area	g/m ²	100 ±10	110 ±10	120 ±10	130 ±10
Min. tensile strength	N/cm	≥40	≥45	≥45	≥50
Min. swelling after 1 min	mm	≥10	≥11	≥11	≥12
Min. swelling after 3 min	mm	≥14	≥15	≥15	≥16

Common properties and test references

PROPERTY	VALUE	REFERENCE METHOD
Minimum elongation	≥12%	ISO 9073-3
Short-term thermal stability	230 °C	Q/TR.J02.01
Long-term thermal stability	90 °C	IEC 216
Maximum moisture content	≤6%	ISO 287

Thickness: ISO 9073-2; tensile / elongation: ISO 9073-3; swelling: GB 450. Mass per unit area: ISO 9073-1.

Supply and construction selection

Specify grade, slit width, core ID, roll diameter and pad or spool format. CZSD-20 master rolls are normally stocked in Manchester for fast conversion and smaller MOQs. Other grades can be stocked to agreed demand. Select overlap, tension and swelling allowance to suit the gap and cable design.

Tape wraps broader cable surfaces; yarn targets internal gaps. A combined system can address both. Use the thinnest grade that meets the water-blocking and mechanical duty after cable testing.

Thermal values describe material stability, not a cable rating. Validate the complete cable for pressure, water chemistry and temperature; salt-water duties need specific qualification. Store sealed, clean and dry.