Kontain GCL Polymer

Polymer-modified natural sodium bentonite powder

Polymer modification supports bentonite swelling in saline conditions and resistance to cracking during drying and rewetting.

Unlaminated polymer-modified bentonite powder in a reinforced GCL. The laminated alternatives are HDL-GCL 020 and HDL-GCL 050.

Bentonite	Natural sodium powder + polymer
Modified swell	>28 mL/2 g
Laminated alternative	HDL-GCL 020 / HDL-GCL 050

Technical properties

Property	Test method	Value
Unmodified natural sodium bentonite swell	ASTM D5890; reagent water	≥24 mL/2 g
Polymer-modified natural sodium bentonite swell		>28 mL/2 g
Polymer-modified natural sodium bentonite swell in saline fluid		>22 mL/2 g in 20,000 ppm salt water
Fluid loss		≤18 mL
Tensile strength, MD / cross direction	ASTM D6768	≥10 / ≥10 kN/m
Static puncture	EN ISO 12236 / ASTM D6241	≥1,600 N
Hydraulic conductivity, tap-water condition		$\leq 5.0 \times 10^{-11}$ m/s
Hydraulic conductivity, 20,000 ppm salt-water condition		$\leq 1.0 \times 10^{-10}$ m/s
Hydrated peak internal shear at 10 kPa normal stress	ASTM D6243	≥30 kPa

Data basis

ASTM D5890 applies to the unmodified base bentonite. Modified-bentonite swell requirements are listed separately for the standard and saline conditions.

Application limits

Assess compatibility with the actual liquid and hydration sequence. Use polymer-compatible seam accessories. The saline values apply to 20,000 ppm salt water. Peak internal shear is not a residual design strength or an interface-friction value.