

# AGRU GeoClay®

## NN66E POLYMER ENHANCED

AGRU America's GeoClay NN66E is an reinforced needle-punched geosynthetic clay liner that comprises a uniform layer of granular bentonite with a proprietary blend of polymer additives to provide extra protection in harsh environments that is encapsulated between a two nonwoven geotextiles. These products are intended for moderate to steep slopes and moderate- to high-load applications, where increased internal shear strength is required.

### GEOTEXTILE COMPONENT

GEOTEXTILE PROPERTY	TEST METHOD	FREQUENCY	MINIMUM AVERAGE ROLL VALUE
Upper Nonwoven, Mass/Unit Area, oz/yd <sup>2</sup> (g/m <sup>2</sup> )	ASTM D5261	200,000 sf	6.0 (200)
Lower Nonwoven, Mass/Unit Area, oz/yd <sup>2</sup> (g/m <sup>2</sup> )	ASTM D5261	200,000 sf	6.0 (200)

### BENTONITE PROPERTY<sup>1</sup>

BENTONITE PROPERTY <sup>1</sup>	TEST METHOD	FREQUENCY	MINIMUM AVERAGE ROLL VALUE
Swell Index, ml/2 g min	ASTM D5890	100,000 lb	24
Moisture Content, %	ASTM D4643	100,000 lb	12% max
Fluid Loss, ml	ASTM D5891	100,000 lb	18 max

### FINISHED GCL PROPERTY

FINISHED GCL PROPERTY	TEST METHOD	FREQUENCY	MINIMUM AVERAGE ROLL VALUE
Bentonite, Mass/Unit Area <sup>2</sup> , lb/ft <sup>2</sup> (kg/m <sup>2</sup> )	ASTM D5993	40,000 sf	0.75 (3.6)
Tensile Strength <sup>3</sup> , lb/in (N/cm)	ASTM D6768	40,000 sf	50 (87)
Peel Strength <sup>3</sup> lb/in (N/cm)	ASTM D6496	40,000 sf	3.5 (6.1)
Hydraulic Conductivity <sup>4</sup> cm/sec max	ASTM D5887	1/project	3 x 10 <sup>-9</sup>
Index Flux <sup>4</sup> m <sup>3</sup> /m <sup>2</sup> /sec max	ASTM D5887	1/week	7 x10 <sup>-9</sup>
Internal Shear Strength <sup>5</sup> psf (kPa)	ASTM D6243	Periodically	500 (24) Typical

### SUPPLY INFORMATION

ROLL SIZE	WIDTH		LENGTH		AREA	
	FT	M	FT	M	FT <sup>2</sup>	M <sup>2</sup>
	15.5	4.7	150	45.7	2,325	216

Notes:

- (1) Bentonite properties tests performed at a bentonite processing facility prior to shipment to GCL production facility. (2) Reported at 0% moisture
  - (3) Tensile strength testing performed in MD using ASTM D 6768.
  - (4) Deaired, deionized water @5 psi maximum effective confining stress and 2 psi head pressure.
  - (5) Specimens are hydrated for 24 hours and sheared at 200 psf. Represent typical peak value.
- Rolls weigh approximately 2,600 lbs, are supplied with two straps and wound on a 4.75" core.

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