



Embankment on Soft Soil



ArmaGrid® – UX_{pp}
INTEGRAL POLYPROPYLENE
UNIAXIAL GEOGRIDS

Temporary Reinforced Slope

ArmaGrid® – UX_{pp}

Uniaxial PP ArmaGrid® is made of polypropylene, by the process of stretching of high quality punched sheet in one direction under strictly controlled conditions. ArmaGrid® – UX_{pp} has consistent high performance properties including high tensile strength up to 300KN/m and high modulus, ageing resistance, chemical and biological durability. These products are used where high strength is required for a relatively short period, for example during the consolidation of embankment foundations.

Applications

- **Foundation Treatment:** ArmaGrid® – UX_{pp} with their high tensile strength and optimum interlock characteristics, combined with compacted granular fill, with its high compressive strength, provide an integrated load-bearing platform on soft ground.

- **Embankment on Soft Soil:** Often considerable consolidation takes place in the soft soil before it develops adequate bearing capacity during the construction of high embankments. The conventional process is to build the embankment in stages so that the embankment height is only increased as the ground develops sufficient strength to support the embankment, without risk of global stability failures. Under these conditions, construction time can be significantly shortened by using High Strength Uniaxial PP TA Grids to reinforce the base of the embankment. ArmaGrid® – UX_{pp} are useful for strengthening of soft soil for dam construction, land reclamation project and alike.

- **Temporary Reinforced Slope:** ArmaGrid® – UX_{pp} can be used to build reinforced steep slopes required for relatively short service life periods (typically, less than 5 years), in which the long term design strength of soil reinforcement is ignored in design. Such applications are necessary for construction of temporary elevated diversions, protective bunds, steep slopes and overpass embankments and for short term construction needs like for flyovers, interchanges, bridging and underpass solutions where space constraints and site encumbrances prevent permanent works at early construction stages.

Technical Parameters

Properties	Test Method	Unit	AG-UX _{pp} 120B	AG-UX _{pp} 160B	AG-UX _{pp} 200B	AG-UX _{pp} 260B	AG-UX _{pp} 300B
Physical Properties							
Material			Polypropylene				
Atd ⁱ		mm	19	19	19	19	19
Bw ⁱ		mm	19	19	19	19	19
Sw ⁱ		mm	5.5	5.5	5.5	5.5	5.5
Tb ^j		mm	4	5	6.2	6.8	6.9
Tr ⁱ		mm	1.4	1.7	2.1	2.6	2.8
Pnom ⁱ		mm	450	450	450	450	450
Mechanical Properties							
			Minimum Average Roll Value (MARV)ⁱⁱ				
Ultimate Tensile Strength	ASTM D6637 B	kN/m	120	160	200	260	300
Tensile Strength 2% Strain ^{iv}	ASTM D6637 B	kN/m	45	60	80	100	110
Tensile Strength 5% Strain	ASTM D6637 B	kN/m	90	120	150	200	220
Typical Stain at Peak Load		%	8	8	8	8	8
Standard Packaging							
Roll Width ^v		m	3	3	3	3	3
Roll Length ^v		m	50	50	50	50	50
Standard Roll Area ⁱⁱⁱ		m ²	150	150	150	150	150

ⁱ Refer to figure 1

ⁱⁱ Values shown are minimum average roll values

ⁱⁱⁱ Other roll option available

^{iv} At 2% strain under 3600 radial loading. Determined from tests in accordance with ISO 10319.

^v These values are subject to ±1% variation

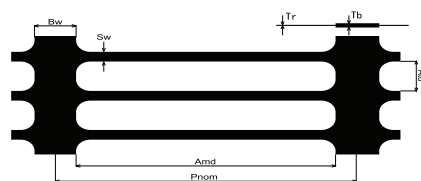


Figure 1

NOTES

- These properties may change at the time of handling, storage and shipping.
- Other grades and polyester material also available as per requirement
- The values can be customized.
- The above values are subject to change as per discretion of the company
- All Strength and Load figures are based on test results from the manufacturer's laboratory in accordance with ISO 10319 at the temperature of 21±1°C and calculated as a lower 95% Confidence limit in accordance with ISO 2602.
- Carbon Black content ≥ 0.5%.
- Measured by comparing the results of tests in accordance with test methods GRI/GG2 and GRI/GG1.

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