

Product Evaluation

RE: Review of FlexGrid UX150PET

PRODUCT

FlexGrid UX150 PET is manufactured by Alliance Geosynthetics LLC, Drain, Oregon. It is supplied in Alberta by Green Patch Environmental Consulting Ltd. in Edmonton.

VENDOR CLAIMS AND INFORMATION

CLAIMS:

The AllianceGeo FlexGrid UX150 PET geogrid is designed for use in grade separation applications. It is dimensionally stable and through a uniform network of ribs and apertures provides tensile reinforcement to the surrounding soil. It offers resistance to installation damage. It is also chemically stable and thereby appropriate for use in for soil pH levels between 2.0 and 12.0. It is resistant to attack by soil micro-organisms and a black PVC coating ensures they are unaffected to ultra-violet radiation for prolonged periods. Product web link: www.alliancegeo.com

DESCRIPTION:

The AllianceGeo FlexGrid UX150 PET geogrid is an uniaxial geogrid manufactured with high molecular weight, high tenacity, polyester yarns using a precision knitting process. It has a cross-machine direction tensile strength of 30kN/m.

POTENTIAL USAGE:

FlexGrid UX150 PET geogrid is mainly used for soil reinforcement applications such as steep slopes, modular block retaining wall, concrete panel retaining wall and wire mesh retaining wall.

STANDARDS:

ASTM D6637 Tensile and ultimate tensile strengths, ASTM D 5262 Creep reduced strength, GRI-GG4b Long term design strength, ASTM D5321 Coefficient of direct sliding.

ALBERTA TRANSPORTATION COMMENTS

EXPERIENCE:

3500 sq. m of FlexGrid UX35 PET which is in the same series of geogrids as FlexGrid UX150 PET was used at House River crossing HWY 63 in 2013. AT has used geogrids similar to this product at many locations.

APPLICATION STANDARDS:

Alberta Transportation does not have a standard for geogrid. All geogrid applications must be properly designed by a Professional Engineer (e.g., registration with APEGA). The use of extensible reinforcement in MSE bridge abutments or wing walls shall conform to the *Standard Specifications for Bridge Construction Section 25, Mechanically Stabilized Earth Walls*. <http://www.transportation.alberta.ca/Content/docType246/Production/SpecificationsforBridgeConstruction2013.pdf>

RECOMMENDATIONS:

FlexGrid UX150 PET be listed as a Potential Product under Alberta Transportation Products List, Geosynthetics – Geogrid – Proprietary, based on the information provided. Final acceptance as a proven product will be based on field performance.

TRIAL PROJECTS

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