

PART 1 - GENERAL

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| <u>1.1 Description</u> | .1 | This section specifies requirements for the supply and installation of synthetic non-woven filter fabric to be used under the rip-rap and filter rock material as shown. |
| <u>1.2 MEASUREMENT PROCEDURES</u> | .1 | Supply and installation of filter fabric of surface covered as shown on drawings will be measured as a fixed price item. |
| <u>1.3 REFERENCES</u> | .1 | American Society for Testing and Materials International, (ASTM) .1 ASTM D 4491-99a, Standard Test Methods for Water Permeability of Geotextiles by Permittivity. .2 ASTM D 4595-11, Standard Test Method for Tensile Properties of Geotextiles by the Wide-Width Strip Method. .3 ASTM D 4751-12, Standard Test Method for Determining Apparent Opening Size of a Geotextile. |
| | .2 | Canadian General Standards Board (CGSB) .1 CAN/CGSB-148.1-M, Methods of Testing Geotextiles and Complete Geomembranes. |
| <u>1.4 SUBMITTALS</u> | .1 | Submit to Engineer the following at least 4 weeks prior to beginning Work. .1 manufactures specifications on the proposed materials to be used. .2 samples of proposed materials. |
| | .3 | Submit to Engineer 2 copies of mill test data and certificate at least 4 weeks prior to start of Work. |
| <u>1.5 DELIVERY, STORAGE AND HANDLING</u> | .1 | During delivery and storage, protect geotextiles from direct sunlight, ultraviolet rays, excessive heat, mud, dirt, dust, debris and rodents. |
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1.6 WASTE
MANAGEMENT AND
Disposal.

- .1 Separate waste materials for reuse and recycling.
- .2 Collect and separate for disposal paper, plastic, polystyrene and corrugated cardboard packaging material.
- .3 Fold up metal banding, flatten and place in designated area for recycling.

PART 2 - PRODUCTS

2.1 Filter Fabric

- .1 Non-woven synthetic fibre fabric, rot proof, unaffected by action of oil or salt water and not subject to attack by marine life, insects or rodents to be supplied in rolls.
- .2 Physical properties:
 - .1 Mass per unit area: minimum 380 g/m².
 - .2 Grab tensile strength and elongation:
 - .1 Breaking force: minimum 1,600 N, wet condition.
 - .2 Elongation at break: minimum - maximum 70-100%.
 - .3 Bursting strength: minimum 3,700 kPa.
- .3 Hydraulic properties:
 - .1 Apparent opening size (AOS): 75 to 150 micrometres.
 - .2 Permeability (K cm s⁻¹) 2.0x10⁻¹.
- .4 Factory seams: sewn in accordance with manufacturer's recommendations.
- .5 Thread for sewn seams: equal or better resistance to chemical and biological degradation than geotextile.

PART 3 - EXECUTION

3.1 INSTALLATION

- .1 Place geotextile material by unrolling in orientation, manner and locations indicated and retain in position with securing pins and washers or weights.
- .2 Place geotextile material smooth and free of tension stress, folds, wrinkles and creases.
- .3 Overlap each successive strip of geotextile 600 mm over previously laid strip.
- .4 Pin successive strips of geotextile with securing pins as recommended by manufacturer.
- .5 Protect installed geotextile material from displacement, damage or deterioration before, during and after placement of material.
- .6 After installation, cover with overlying layer within 4 hrs of placement.
- .7 Replace damaged or deteriorated geotextile to approval of Departmental Representative .