



Warminster Fiberglass
Water and Wastewater Treatment Products
Keeping Americas' Water Clean

SECTION 11209.1 ALGAE COVERS (Flat)

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Algae Covers.

1.2 REFERENCES

- A. ASTM D 256- Standard Test Methods for Determining the Pendulum Impact Resistance of Notched Specimens of Plastics.
- B. ASTM D 570 - Standard Test Method for Water Absorption of Plastics.
- C. ASTM D 638 - Standard Test Method for Tensile Properties of Plastics.
- D. ASTM D 790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- E. ASTM D 2583 - Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.

1.3 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Test results of fiberglass reinforced plastic laminate.
- C. Shop Drawings Show:
 - 1. Critical dimensions, jointing and connections, fasteners and anchors.
 - 2. Materials of construction.
 - 3. Sizes, spacing, and locations of structural members, connections, attachments, openings, fasteners, and loads.
 - 4. Field measurements or plans.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Store products indoor and protect from construction traffic and damage.

PART 2 PRODUCTS

Warminster Fiberglass
P.O. Box 188
Southampton PA 18966-0188
725 County Line Road
Phone: 215-953-1260 | Fax: 215-357-7893



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2.1 MANUFACTURER

A. Providing products manufactured by Warminster Fiberglass Company; P.O Box 188, Southampton PA 18966-0188; <http://www.warminsterfiberglass.com/> Tel. (215) 953-1260, Fax. (215) 357-7893.

B. Products from other manufactures will be considered for substitution prior to receipt of bids. Requests for substitution after bids have been received will not be considered. Requests for substitution must include the following information to be considered:

1. Formal written request certifying that products to be substituted will match specified products in terms of structural properties, dimensions, physical, appearance, quality level, and quantities, and that they will perform the same function in the same manner and will achieve the same result.
2. Manufacture's and suppliers material data sheets, specifications, and performance data.
3. A list of three or more projects in satisfactory services for not less than three years with enclosures identical to those being proposed for substitution. For each project, include name, address, and telephone number of the engineer, the contractor, and the plant manager.

2.2 ALGAE COVERS

A. Material: Fiberglass reinforced poly resin composite laminate, having the following physical characteristics:

1. Color: White.
2. Tensile strength (ASTM D 638): Minimum 9,000 psi.
3. Flexural strength (ASTM D 790): 16,000 psi.
4. Flexural modulus (ASTM D 790): 900,000 psi.
5. Impact, Notched, Izod (ASTM D 256): 10.0 ft-lb/in.
6. Barcol hardness (resin-rich surface) (ASTM D 2583): 40 minimum, average.
7. Water absorption, (ASTM D 570): 0.2 percent at 24 hrs.
8. Heat distortion point: (ASTM D 648): 175 degrees F.
9. Coefficient of thermal expansion, average (ASTM D 696): 10.5×10^{-6} in/in/degree F.
10. Test coupons prepared in accordance with ASTM D 618.

B. Algae Cover Segments:

1. Nominal length 6 feet.
2. Molded of fiberglass-reinforced polyester resin composite laminate, minimum 1/4-inch wall thickness, with minimum 20 mil thick gel coat each surface.
3. Mold integral mounting flange 1/4 -inch thick along top edge, factory drilled for anchors.
4. Mold face sloping inward and downward.
5. Mold integral 3/8 x 3/4 aluminum ribs to resist sag.
6. Provide 2-1/2" wide x 6' long stainless steel piano hinges attached with 1/8" stainless steel rivets.

C. Support Brackets: Type 316 Stainless Steel Support Brackets to support the covers shall be 2 x 2 x 1/4 x 23" long

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with a welded flat on top to fit flat against the underside of the cover. Shop drill 2 places for 1/2 x 3-3/4 type 316 Stainless Wedge anchors spaced on 24" centers. Support Brackets shall hold the top cover 4" above the scum baffle.

- 2.2 C-1 Allow 1/8 -inch gap between each section to prevent binding and take up of wall variations.
- 2.2 C-2 Cover sections shall be molded circular to the tank diameter and shall consist of a 4-inch wide vertical flange for mounting to the tank wall with 1/2 x 3-3/4 type 316 Stainless Steel Wedge Anchors.
- 2.2 C-3 Silicone coat all field cut edges and drilled holes.
- 2.2 C-4 Paint in red on all sections "**DO NOT WALK OR STAND ON COVER**".
- 2.2 C-5 A 2-year warranty will be required of the manufacturer of the covers. The warranty will cover labor and materials and if found to be defective, shall be repaired or replaced immediately at no cost to the owner

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that dimensions are correct and project conditions are suitable for installation. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A.** Ensure that products are installed plumb and true, free of warp or twist, within tolerances specified by the manufacturer and as indicated in the contract documents.
- B.** Install in accordance with approved shop drawings and in true and proper alignment.
- C.** Mounting Brackets: Install two brackets per segment, equally spaced; anchor to substrates using 1/2 diameter Type 36 Stainless Steel Wedge anchors.
- D.** Segments: Install to full extent indicates on drawings.

3.3 ADJUST AND CLEAN

- A.** Clean surfaces in accordance with manufacturer's instructions.
- B.** Remove trash and debris, and leave the site in a clean condition.

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Note: Specifications are subject to change without notice.

END OF SECTION

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