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INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS

IAPMO GUIDE CRITERIA

FOR

FACTORY-ASSEMBLED SEPTIC TANK KITS

IGC 231-2006

1. PURPOSE

- 1.1** The purpose of this standard is to establish an acceptable quality standard for factory-assembled septic tanks kits intended for domestic sewage disposal systems. It shall serve as a guide for producers, distributors, architects, engineers, contractors, installers, inspectors and users, and to promote a better understanding regarding materials, manufacture, and installation.
- 1.2** The provisions of this standard are not intended to prevent the use of any alternate material or method of construction, provided any such alternate meets the intent and requirements of this document and changes are amended to this standard.

2. SCOPE

- 2.1** Factory-assembled septic tank design shall be such as to produce a clarified effluent consistent with accepted practice and shall provide adequate space for sludge and scum accumulations.

3. DEFINITION

- 3.1** **Factory-Assembled Septic Tank Kits.** Tanks consisting of 6 plastic sheets to form tanks using inter-locking channels, angles and internal bracing, along with threaded rods and pan head screws, nuts and fender washers.

4. REFERENCED STANDARDS

- 4.1** All standards referenced herein shall be the current edition of those standards.

CSA B66
IAPMO PS 1

Prefabricated Septic Tanks and Sewage Holding Tanks
Prefabricated Septic Tanks

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5. GENERAL REQUIREMENTS

5.1 Factory-assembled septic tanks shall be constructed to comply with the applicable requirements in Section 4 of IAPMO PS 1 and Section 3.2 of CSA B66.

5.1.1 Drawings submitted for listing are not required to be stamped by a registered Professional Engineer (PE).

5.2 Tanks consisting of 6 plastic sheets to form tanks shall be joined using copolymer polypropylene seamless inter-locking channels complying with Section 5.3 of this standard, PVC angles and internal bracing complying with ASTM D 1784 or D 1785, Stainless Steel 304 threaded rods complying with ASTM F 593, Stainless Steel 305 pan head screws complying with ASTM F 594, Stainless Steel nuts and fender washers complying with ASTM F 594 and Rubber Seals complying with ASTM C 923.

5.3 Copolymer Polypropylene

5.3.1 Copolymer polypropylene shall comply with the following minimum property requirement:

Property	Value	ASTM Test
a) Izod, Impact Strength:	10.0 ft-lb/in notch	D 256
b) Tensile Yield Strength:	3600 psi	D 638
c) Flexural Elongation:	160000 psi	D 790
d) Density:	0.901 g/cm ³	D 792
e) Nominal Melt Flow:	0.70 g/10 min	D 1238
f) Elongation:	13.0 %	D 638
g) Rockwell Hardness	78	D 785

5.3.2 The thickness of the side walls, top, bottom, and covers shall be at least 1/4" (6.4 mm). The thickness of the inlet and outlet ends shall be at least 1/4" (6.4 mm), and the thickness of internal walls and partitions shall be at least 3/16" (4.8 mm).

5.4 Factory assembled septic tanks and covers shall be designed for an earth load of not less than 24 kPa (500 psf) when the maximum coverage does not exceed 0.9 m (3'). Each tank and cover shall be structurally designed to withstand all anticipated earth or other loads and to be installed level and on a solid bed. Wood covers are prohibited. Tanks for installation in traffic areas shall be designed to withstand an AASHTO H20-44 wheel load, an additional 0.9 m (3') earth load with an assumed soil weight of 4.8 kPa (100 psf), and 1.4 kPa (30 psf) fluid equivalent sidewall pressure.

5.5 Elastomeric polymer sealant shall comply with the following minimum property requirement:

Property	Value	ASTM Test
a) Specific Gravity:	1.5	-----
b) Shear Strength:	>400 psi	D 1002
c) Elongation at Break:	>250%	D 412
d) Hardness Shore A:	61	C 661
e) Slump:	Zero Slump	C 637

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