

Internal Use Only

INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS

STANDARD FOR

PRESSURIZED AND NON-PRESSURIZED POTABLE WATER TANKS FOR USE IN RECREATIONAL VEHICLE

IAPMO TS 4-2006

1. PURPOSE

- 1.1** The purpose of this standard is to establish an acceptable standard for minimum health and safety protection for the manufacture of pressurized and non-pressurized water tanks for use in recreational vehicles. Its purpose is to serve as a guide for producers, distributors, designers, engineers, installers, inspectors and users; to promote an understanding regarding materials, manufacture and installation; and to provide for identifying potable water tanks that conform to this standard.

2. SCOPE

- 2.1** This standard covers the physical requirements and tests for the corrosion inhibitors, toxicity, pressures, cleanability and other significant properties of construction and finish. Provisions for proper installation of the finished product are also given, together with methods of marking and identification.

3. GENERAL REQUIREMENTS

- 3.1** Tanks shall be constructed with smooth interior surfaces, without concealed fouling areas to assure ease of cleaning.
- 3.2** All materials which come into contact with potable water shall be non-toxic and shall show compliance with IAPMO TS 31.
- 3.3** Solder and fluxes with a lead content which exceeds two tenths (0.20) of one (1) percent are prohibited in piping systems used to convey potable water.
- 3.4** Tanks shall be made of one of the following materials:

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- (a) Stainless steel - 18-8, Type 300 series, minimum 28 gauge* (0.0160 in.).
- (b) Copper or silicone bronze of 1/4 hard (min. temper).
 - If tank is round - Minimum B & S gauge - 21 (0.0350 in.).
 - If tank is square - Minimum B & S gauge - 19 (0.0460 in.).
- (c) Galvanized sheet metal - Minimum 28 gauge (0.0160 in.).
- (d) Aluminum alloy - Minimum of 26 gauge (0.0198 in.) type 5050, 5052, 5086, 6061.
- (e) Plastics meeting the requirements of 3.2.
- (f) Carbon steel (minimum 0.031 in.), lined with plastic as per 3.2 above.

*Manufacturer's Standard for Sheet Stainless

- 3.5** Tanks made of material in Items 3.4 (c) and (d) shall have their interior coated with a non-soluble rust inhibitor. Tanks shall be thoroughly cleaned, neutralized and primed prior to the application of the inhibitor. All inhibitors shall be applied in accordance with the manufacturer's instructions.
- 3.6** Tanks shall be equipped with an outlet installed so as not to retain water deeper than three-eighths (3/8) in. when connected to the piping. The outlet shall be a minimum of one half (1/2) inch IPS for tanks of thirty (30) gallons or larger.
- 3.7** To allow escape or intake of air, to preclude tank collapse upon fast water withdrawal, or rupture by force filling, non-pressurized tanks shall be vented to the atmosphere. This requirement does not apply to collapsible tanks.
 - 3.7.1** Venting, through the fill spout or cap shall prevent rainwater or other contaminants from entering the tank opening. Interior vents shall be protected from dust, insects and vermin.
- 3.8** Only fittings listed for use in pressure systems shall be used in or on pressure tanks.
- 3.9** Tanks and their points of support shall be so constructed as to withstand road shock or vibration to which they will be subjected.
- 3.10** After testing, as specified in paragraph 4.1, tank shall have all openings sealed or protected.

4. TESTING REQUIREMENTS

- 4.1** **Production Test.** One of the following tests shall be run on all production units.
 - 4.1.1** Plastic pressure tanks shall be hydrostatically tested to a minimum pressure of two

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