

Specification for Fiberglass Reinforced Plastic Tanks

API SPECIFICATION 12P
FIFTH EDITION, MAY 2022

EFFECTIVE DATE: NOVEMBER 1, 2022



American
Petroleum
Institute

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Specification for Fiberglass Reinforced Plastic Tanks

1 Scope

1.1 General

This specification covers material, design, fabrication, and testing requirements for fiberglass-reinforced plastic (FRP) tanks. Only shop-fabricated, vertical, cylindrical tanks are covered. Tanks covered by this specification are intended for aboveground and atmospheric pressure service. Unsupported cone bottom tanks are outside the scope of this specification.

This specification is designed to provide the petroleum industry with various standard sizes of FRP tanks. Because of the versatility of FRP tanks, the user shall be responsible for determining the suitability of FRP tanks for the intended service.

NOTE The consequences of exposing FRP tanks to high temperatures created by exposure fires should be considered. This material loses strength as the temperature increases. FRP tanks should be suitably protected against fire exposure or so located that any spills resulting from the failure of these materials could not unduly expose persons, buildings, structures, or other equipment to the possible fire incident.

1.2 Compliance

1.2.1 The manufacturer is responsible for complying with all of the provisions of this specification. The purchaser is responsible for defining their specific requirements in the data sheet (see Figure D.1; hereafter referred to as "the data sheet"). The purchaser may make any investigation necessary to be satisfied with compliance by the manufacturer and may reject any material that does not comply with this specification.

NOTE The purchaser is encouraged to arrange for inspection independent of the inspection furnished by the manufacturer, and the purchaser's inspector should follow closely all the details of shop fabrication and testing herein specified that affect the integrity and safety of the completed structure.

1.2.2 If specified by the purchaser on the data sheet, the tank shall be constructed in accordance with API Q1 and the API Monogram Program (see Annex A).

1.2.3 This specification applies to new tanks. The requirements may be applied to existing tanks at the discretion of the owner/operator.

1.2.4 This specification has requirements given in two alternate systems of units. The manufacturer shall comply with the U.S. customary (USC) units. The SI unit equivalent is provided for convenience.

NOTE Per API document style, SI unit values appear first, followed by their USC equivalents in parentheses.

2 Normative References

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any addenda) applies.

API Standard 650, *Welded Tanks for Oil Storage*

API Standard 2000, *Venting Atmospheric and Low-pressure Storage Tanks*

API Recommended Practice 2003, *Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents*