Oil Storage Tank Standards - Exact Published Data Tables

This document is a standards-based summary built around exact numeric values and scope statements that are publicly available from API and NFPA sources. It is intended for website content planning and RFQ framing, not as a substitute for the purchased full standards.

1. Publicly Available Exact Limits and Scope Statements

Standard	Exact published value / scope statement	Practical meaning for oil storage work
API Std 650 (13th Ed., Mar 2020)	Applies to non-refrigerated service with maximum design temperature of 93 C (200 F) or less. Internal pressure is approximating atmospheric pressure, defined in the API catalog summary as internal pressure not exceeding the weight of the roof plates; higher internal pressure is permitted when additional requirements are met.	Use as the core reference for vertical, cylindrical, aboveground welded oil storage tanks in atmospheric or near-atmospheric service.
API Std 2000 (5th Ed., Sep 2024)	Covers normal and emergency venting for tanks designed for operation from full vacuum through 103.4 kPa(g) [15 psig].	Use to size and select normal / emergency venting for atmospheric and low-pressure oil storage tanks.
API RP 575 (3rd Ed., Oct 2013)	Inspection practice summary covers atmospheric and low-pressure storage tanks designed to operate at pressures from atmospheric to 15 psig.	Useful as the inspection-practice boundary when the project discusses atmospheric vs low-pressure tank service.
API Std 653 (5th Ed., Nov 2014)	Covers steel storage tanks built to API 650 and predecessor API 12C. Scope is limited to the tank foundation, bottom, shell, structure, roof, attached appurtenances, and nozzles to the face of the first flange, first threaded joint, or first welding-end connection.	Use for in-service inspection, repair, alteration, relocation, and reconstruction scope - not for first-time tank design.

Note: API 620 is commonly used for large, welded, low-pressure storage tanks, but the exact pressure limit is not quoted in the public API catalog snippet reviewed here. For clause-level pressure limits, the purchased edition should be checked directly.

2. NFPA 30 Liquid Classification - Exact Flash Point and Boiling Point Thresholds

NFPA 30 class	Closed-cup flash point	Boiling point	Typical storage implication
Class IA	FP < 73 F (22.8 C)	BP < 100 F (37.8 C)	Highest volatility band; drives stricter storage, venting, and fire-safety review.
Class IB	FP < 73 F (22.8 C)	BP >= 100 F (37.8 C)	Flammable liquid; still below the 73 F flash-point threshold.
Class IC	FP >= 73 F (22.8 C) and < 100 F (37.8 C)	Not a separate BP threshold in the NFPA summary table	Still flammable by NFPA 30 classification logic.
Class II	FP >= 100 F (37.8 C) and < 140 F (60 C)	-	Combustible liquid; lower volatility than Class I liquids.

NFPA 30 class	Closed-cup flash point	Boiling point	Typical storage implication
Class IIIA	FP >= 140 F (60 C) and < 200 F (93.3 C)	-	Combustible liquid; often relevant for heavier fuel products.
Class IIIB	FP >= 200 F (93.3 C)	-	Highest flash-point band in the NFPA 30 classification summary.

3. Standards-Based Data Fields for RFQ and Datasheet Preparation

Data field	Units / format	Why it matters	Standards tie-in
Tank capacity	m3 or bbl	Defines working volume and basic tank family.	Needed before selecting API 650 atmospheric vs other tank routes.
Tank diameter x shell height	m x m	Controls footprint, shell courses, and roof geometry.	Core sizing data for API 650 type tanks and capacity development.
Design temperature	C / F	Directly affects material and standard applicability.	Public API 650 summary reviewed here is limited to 93 C (200 F) or less for non-refrigerated service.
Internal pressure / venting basis	kPa(g) or psig	Determines whether atmospheric / near-atmospheric assumptions remain valid and what venting basis is required.	API 2000 public scope covers full vacuum through 103.4 kPa(g) [15 psig].
Stored liquid class	NFPA 30 class IA / IB / IC / II / IIIA / IIIB	Ties product volatility to safety review, venting, and fire-protection logic.	Use exact NFPA 30 flash-point thresholds from Table 2.
Inspection scope	Visual, dimensional, NDE, hydrotest, coating, document set	Separates design standard from in-service integrity standard.	API 653 scope begins after tanks are in service; API 650 remains the design/fabrication baseline.

4. Quick Use Rules for a Website Standards Block

1. Use API 650 when the page is clearly about non-refrigerated, vertical, cylindrical, aboveground welded oil tanks in atmospheric or near-atmospheric service, and keep the 93 C (200 F) maximum design temperature from the public API summary visible.

2. Use API 2000 when the copy discusses venting, because the public API summary gives an exact applicability range from full vacuum through 15 psig.

3. Use API 653 only for tanks already in service. It is an integrity / repair / alteration standard, not the first design basis for a new tank.

4. Use NFPA 30 class data when the page discusses crude oil, fuel oil, diesel, or other petroleum liquids and you need exact fire-classification thresholds.

Source basis used in this summary: API 2025 Refining Publications Catalog public summaries for API 650 and API 2000; API 653 public summary sheet; API Mechanical Integrity standards summary for RP 575; NFPA public 2024 classification summary for NFPA 30.