



# Standard Specification for Doors, Non-Tight, for Marine Use<sup>1</sup>

This standard is issued under the fixed designation F1070; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This specification to be used in conjunction with Specification F1073, covers the principal dimensions and the mechanical requirements for manufacturing steel, aluminum, and glass-reinforced plastic non-tight, personnel doors and dutch doors, with the exception of joiner, joiner dutch doors, and expanded metal doors, for marine use.

1.2 The doors will be used in non-tight bulkheads.

1.3 When fire protection requirements are applicable to the location of these doors, then the use of aluminum and glass-reinforced plastic doors shall be unacceptable.

1.4 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

## 2. Referenced Documents

2.1 *ASTM Standards:*<sup>2</sup>

A36/A36M Specification for Carbon Structural Steel

A131/A131M Specification for Structural Steel for Ships

B209 Specification for Aluminum and Aluminum-Alloy Sheet and Plate

F1073 Specification for Door Fittings, for Watertight /Gastight /Airtight, Weathertight, and Non-Tight Doors, for Marine Use

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee F25 on Ships and Marine Technology and is the direct responsibility of Subcommittee F25.03 on Outfitting and Deck Machinery.

Current edition approved March 1, 2019. Published March 2019. Originally approved in 1987. Last previous edition approved in 2012 as F1070 – 87 (2012). DOI: 10.1520/F1070-19.

<sup>2</sup> For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

2.2 *ABS Standard:*<sup>3</sup>

Rules for Building and Classing Steel Vessels

2.3 *Military Standards:*<sup>4</sup>

MIL-P-17549 Plastic Laminates, Fibrous Glass Reinforced, Marine Structural

MIL-R-21607 Resins, Polyester Low-Pressure Laminating, Fire Retardant

MIL-P-24441 Epoxy-Polyamide Paint

MIL-C-81706 Coating, Aluminum and Aluminum Alloys

MIL-PRF-24635 Silicone-Alkyd Enamel Paint Weather-Resistant, Exterior Use

NAVSEA SI 009-32 Cleaning and Painting Requirements; accomplish

## 3. Ordering Information

3.1 Ordering for doors under this specification shall include the following:

3.1.1 Type of door and material (see Table 1 and Figs. 1-3),

3.1.2 Nominal and ASTM designations,

3.1.3 Quantity, hand of door (right hand or left hand, or both), and

3.1.4 Optional items, such as fixed lights, door locks, to be indicated.

3.2 Inspection and acceptance of doors shall be agreed upon between the purchaser and the supplier.

## 4. Materials and Manufacture

4.1 The materials and specifications shall be as given in Table 1.

4.2 Glass-reinforced plastic (GRP) material of doors shall meet the requirements of MIL-P-17549, Grade 1. In addition, laminate must have the flammability limits equal to the requirements for Grade 2, Class A of MIL-R-21607.

## 5. Construction, Shape, and Dimensions

5.1 The construction, shape, and clear opening dimensions shall be as shown in Tables 1 and 2 and Figs. 1-3 and conform to the following requirements:

<sup>3</sup> Available from American Bureau of Shipping (ABS), ABS Plaza, 16855 Northchase Dr., Houston, TX 77060, http://www.eagle.org.

<sup>4</sup> Available from DLA Document Services, Building 4/D, 700 Robbins Ave., Philadelphia, PA 19111-5094, http://quicksearch.dla.mil.

**TABLE 1 Standard Door Materials**

Number	Component	Mild Steel	Aluminum	Glass-Reinforced Plastic (GRP)
1	door panel	Specifications <b>A36/A36M</b> or <b>A131/A131M</b>	Specification <b>B209</b>	MIL-P-17549, Grade 1
2	stiffeners	Specifications <b>A36/A36M</b> or <b>A131/A131M</b>	Specification <b>B209</b>	integral

**TABLE 2 Door—Non-Tight**
**UNITS: INCHES**

NOTE 1—1 in. = 25.4 mm.

Nominal No.	Size of Opening		Door			Calculated Mass, lb
	Width	Height	W	H	h	
2654		54		55	16.5	83
2666	26	66	27	67	25.5	101
3060		60		61	22	105
3063	30	63	31	64	24	110
3066		66		67	25.5	116

5.1.1 A right-hand opening door shall be construed as one that opens towards you with hinges located on right side of door. A left-hand opening is similar but with hinges on the left.

5.1.2 The size of the door opening and shape shall be as given in **Table 2**.

5.1.3 **Figs. 1 and 2** show the right-hand opening, and in the case of left-hand opening, the arrangement of fittings shall be reversed.

5.1.4 The position of the grab handles shall be located on the center of the height of both sides of the door; in the case of dutch doors, the location of the grab handles shall be suitably positioned in the top panel.

5.1.5 The material of the standard door components shall be as shown in **Table 1**.

5.1.6 Doors shall be fitted with dogs, hinges, hasp and staple assemblies, grab handles, label plates, and hook assemblies; for details, see Specification **F1073**.

5.1.7 Welding shall be done in accordance with the Rules of American Bureau of Shipping.

## 6. Workmanship, Finish, and Appearance

6.1 All sharp and ragged edges shall be ground flush and removed for personnel protection.

6.2 Pretreatment and priming of door components shall be as follows:

6.2.1 Steel doors and components shall be coated with inorganic zinc-rich primer SSPC Paint 20 Type I-C at 1.5 to 3.0 mil (MDFT), both sides before assembly, following surface preparation in accordance with the manufacturer's instructions.

6.2.2 Aluminum doors and components are to be pretreated with wash primer coating followed with lead-free, chromate-free, anticorrosion prime coating. Pretreatment and primer are to be applied before assembly, following surface preparation, in accordance with the manufacturer's instructions.

6.2.3 GRP doors and components are to have color tint "haze gray" painted upon completion of the molding process.

## 7. Product Marking

7.1 Each door shall be marked with the purchase order number by attaching a CRES label plate to the door panel using letters at least ½ in. (12.7 mm) high, indicating the ASTM designation number, nominal number, thickness of door plate, and direction of opening. Other markings may be in paint.

7.2 Label plates shall be screwed or bolted to the door panel on steel and aluminum doors.

7.3 GRP door label plates shall be affixed to the door with epoxy.

## 8. Packaging and Package Marking

8.1 Doors shall be crated or attached to a pallet in a manner acceptable for shipment by a common carrier. The door and door frame assembly shall be shipped as one unit, with gasket protected from knife edge by an inserted partition.

## 9. Keywords

9.1 doors; dutch doors; marine; non-tight doors; personnel doors; ship