



The relevant sections of ISO 8729-1-2 Performance Standards for Radar Reflectors effective 22nd July 09.

Ships and marine technology — Marine radar reflectors — Part 1: Passive type

1 Scope

It is recognised that small vessels, often made of Glassfibre Reinforced Plastic (GRP), can be poor reflectors of radar signals. In times when radar is the prime observation tool used by ships at sea the International Maritime Organisation considers that it is essential that small vessels, considered in this context to be those under 150 gross tonnage, be equipped with a radar reflector to enhance their radar return and thus to improve their visibility to radar.

This International Standard specifies the minimum requirements for a radar reflector intended to enhance returns from small vessels as required by IMO Resolution MSC. 164(78).

5.1 General requirements

The radar reflector shall comply with the following minimum requirements for the frequency range of 9 300 MHz to 9 500 MHz (X-band), and 2 900 MHz to 3 100 MHz (S-band).

5.2 Reflecting pattern in horizontal plane

5.2.1 *The radar reflector shall have a Stated Performance Level of at least 7,5 m² at X-Band and 0,5 m² at S-band. The SPL shall be maintained over a total angle of at least 280°*

The response shall, at the assessed level for each polar plot:

- not have any nulls greater than a single angle of 10°; and
- not have a distance between nulls of less than 20°. Nulls of less than 5° shall be ignored for this calculation.

To ensure the defined radar response related to the noted size reflector, it shall be *mounted at a minimum height of 4 m above water level.*

For smaller heights, a larger reflectors in accordance with Annex A shall be used.

5.2.2 *For power driven vessels and sailing vessels designed to operate with little heel (catamaran/trimaran), this performance shall be maintained through angles of (athwartships) heel 10° either side of vertical. For other sailing vessels, the reflector shall maintain this performance over 20° either side of vertical.*



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Annex D
(informative)

Requirements for the passive radar reflectors for Non-SOLAS vessels

D.1 Scope

This annex gives special requirements for passive radar reflectors for Non-SOLAS vessels; the requirements in this annex should take precedence over those listed in the main part.

D.2 Requirements for the passive radar reflectors for Non-SOLAS vessels

Passive radar reflectors for Non-SOLAS vessel should meet all requirements specified in the main part of this standard, with the exception of the following requirements.

D.2.1 Azimuth polar diagrams

Its azimuth polar diagrams should be such that response over a total angle of 240° is not less than 2,5 m² at X-band.

D.2.2 Stated Performance Level (SPL)

The radar reflector should provide a Stated Performance Level (SPL) of at least 2,5 m² at X-band. The SPL should be maintained over a total angle of at least 240°.