
**Plastics — Burning behaviour —
Intermediate-scale fire-resistance
testing of fibre-reinforced polymer
composites**

*Plastiques — Comportement au feu — Essais de résistance au feu à
échelle intermédiaire des composites polymères renforcés de fibres*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

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The committee responsible for this document is ISO/TC 61, *Plastics*, Subcommittee SC 4, *Burning behaviour* in collaboration with ISO/TC 92, *Fire safety*, Subcommittee SC 2, *Fire containment*.

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Introduction

Small ships, which are normally made of fibre reinforced plastics (FRP), are required to have fire resistance under international regulations such as *The Torremolinos International Convention for the Safety of Fishing Vessels*, superseded by *The 1993 Torremolinos Protocol*^[4] and other national regulations. Therefore, development of a test method to prove the fire resistance of FRP construction of such ships is required. The construction panel of FRP in such ships would not have a height greater than 2 m.

Structures of railway passenger cars and other mass-transport media are, in many cases, made of FRP and should have fire-resistance performance to prevent fire propagation within the car. A fire-resistance test will be required for such structural members. In such applications, the structural dimensions are, in many cases, smaller than the size of the test specimen specified for the full-scale fire-resistance test in ISO 834-1.

This International Standard specifies a smaller test specimen than that specified in ISO 834-1. It has been developed as a method for determination of the fire resistance of FRP in various intermediate-scale non-loading applications, mainly in transport media, such as barriers and partitions in water crafts and vessels, railway vehicles, aircraft and road vehicles.

This International Standard has been developed by ISO/TC 61/SC 4 in close cooperation with ISO/TC 92/SC 2 and provides specific test procedures for FRP using ISO 834-12 as the basis of the intermediate-scale fire-resistance test.

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