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**Fibre-reinforced plastic composites —  
Standard qualification plan (SQP) for  
composite materials, including reduced  
qualification plan (RQP) and extended  
qualification plan (EQP) schemes**

*Composites plastiques renforcés de fibres — Plan de qualification  
normalisé (PQN) pour matériaux composites, y compris les  
programmes pour plan de qualification réduit (PQR) et plan de  
qualification étendu (PQE)*

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## Foreword

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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 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 13, *Composites and reinforcement fibres*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

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## Introduction

This document has been prepared to provide suppliers, designers, end-users and regulators of fibre-reinforced plastic/composite materials, with an initial qualification framework aimed at reducing the substantial costs involved in qualifying materials against different bespoke company specifications, with varying degrees of commonality. Indeed, the cost associated with qualifying materials can prevent the use of new materials in certain applications or even the development of new materials themselves. In addition, designers and end-users often find that appropriate data for materials selection and preliminary design are not readily available or comparable. Widespread use of this document for initial qualification is intended to lead to a reduction in qualification costs and increased availability of reliable and robust materials data across a wide range of sectors and applications. It provides for more detailed qualification procedures, including calculation of B-basis design allowable, compared to ISO 10350-2.

Material suppliers are intended to adopt this procedure for obtaining the required data to support initial material selection and qualification; and to supply the specified data, in the format given in [Annex A](#), at the same time as release of the material evaluated. This will greatly extend the availability of consistent and comparable materials data based on agreed individual, international test methods to support users, fabricators and regulators.

Validation has been undertaken for thermoset systems, which are currently the most abundant and established matrix-based systems. However, it is accepted<sup>[1]</sup> that the calculations, and therefore the property data, can also be applied to similar thermoplastic matrix-based systems.

Therefore, thermoplastic matrix-based systems can also be covered by the document, providing the underpinning test method's technical aspects are met regarding failure mode etc.; with the exclusion of property tests specifically designed for uncured thermoset materials, where indicated.

It is noted that, simultaneously, the underpinning test methods are themselves being reviewed for application to a wider range of fibre formats and matrices. Validation data will be added for thermoplastic matrix-based systems when international precision trials are conducted.

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