TECHNICAL REPORT

# ISO/TR 18486

Second edition
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# Plastics — Parameters comparing the spectral irradiance of a laboratory light source for weathering applications to a reference solar spectral irradiance

*Plastiques — Paramètres de comparaison de la distribution spectrale d'une source de lumière de laboratoire pour les applications de vieillissement et d'une distribution spectrale solaire de référence*



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# Foreword

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This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 6, *Ageing, chemical and environmental resistance*.

This second edition cancels and replaces the first edition (ISO/TR 18486:2016), which has been technically revised. The main changes compared to the previous edition are as follows:



— Figures 1, 2 and A.1: the keys and their key descriptions have been corrected;

— the document has been editorially revised.

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.

# Introduction

Laboratory radiation sources generate radiation which is intended to simulate a defined "reference sun" as perfect as possible, where the fitting to the spectral irradiance in the materials sensitive range is most important. So far, the fitting is described verbally only (e.g. standards concerning artificial weathering) and the user decides for himself if the spectral irradiance $E(\lambda)$ indicated by the producer of the laboratory radiation source agrees suitable enough with the "reference sun" for his specific application or, occasionally, the classification describes the fitting to a wanted "reference sun" only insufficiently (e.g. for standard weathering tests).

This document deals with a procedure for the determination of objective factors characterizing the grade of fitting in quantity.

One procedure describes the grade of fitting of a laboratory radiation source to the defined reference sun for specific spectral ranges. A second procedure results in characterizing parameters for the respective wavelength ranges, incorporating known action spectra.