Pallets for materials handling
— Flat pallets
Part 4: Procedure for predicting creep responses in stiffness tests for plastic pallets using regression analyses
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Date Text affected
Pallets for materials handling — Flat pallets —

Part 4:
Procedure for predicting creep responses in stiffness tests for plastic pallets using regression analyses

Palettes pour la manutention — Palettes plates —

Partie 4: Mode opératoire pour prédire les réponses au fluage lors des essais de rigidité des palettes en plastique en utilisant des analyses de régression
Foreword

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The committee responsible for this document is ISO/TC 51, Pallets for unit load method of materials handling.

ISO 8611 consists of the following parts, under the general title Pallets for materials handling — Flat pallets:

— Part 1: Test methods
— Part 2: Performance requirements and selection of tests
— Part 3: Maximum working loads
Pallets for materials handling — Flat pallets —

Part 4:
Procedure for predicting creep responses in stiffness tests for plastic pallets using regression analyses

1 Scope
This part of ISO 8611 presents a procedure for predicting creep responses in stiffness tests for plastic pallets to shorten the test period. Based on regression analyses, deflections during full load and relaxation periods are predicted. This part of ISO 8611 is for use with the static stiffness tests such as tests 1b, 3b, 4b, 5b, and 7b referred to in ISO 8611-1:2011, and is for application at ambient temperature only. Annex A gives an informative example of this process.

2 Normative references
The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 445, Pallets for materials handling — Vocabulary

ISO 8611-1:2011, Pallets for materials handling — Flat pallets — Part 1: Test methods

ISO 8611-2:2011, Pallets for materials handling — Flat pallets — Part 2: Performance requirements and selection of tests

3 Terms and definitions
For the purposes of this document, the terms and definitions given in ISO 445 and the following apply.

3.1 regression analysis
statistical technique for modelling and analysing the relationship between several variables, where the focus is on the relationship between a dependent variable and one or more independent variables

3.2 least square method
statistical method of estimating the coefficients in the regression model such that the sum of squared residuals are minimized, where the residual is the difference between an observed value and the value provided by the model

3.3 test period
period required for the stiffness test of plastic pallets, which is divided into full test load period and relaxation period

3.4 full test load period
full period required for the stiffness test of plastic pallets under load, which lasts for 24 h or 48 h depending upon the type of tests