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AMENDMENT 1
2007-02-01

Plastics — Determination of dynamic mechanical properties —

Part 6: Shear vibration — Non-resonance method

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Plastiques — Détermination des propriétés mécaniques dynamiques —

Partie 6: Vibration en cisaillement — Méthode hors résonance

AMENDEMENT 1

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Foreword

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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.

Amendment 1 to ISO 6721-6:1996 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 2, *Mechanical properties*.

Plastics — Determination of dynamic mechanical properties —

Part 6:
Shear vibration — Non-resonance method

AMENDMENT 1

Page 1, Clause 1

Replace the first paragraph by the following (grey shading indicates new text):

> "This part of ISO 6721 describes a forced, non-resonance method for determining the components of the shear complex modulus G^* of polymers at frequencies typically in the range 0,01 Hz to 100 Hz. Higher-frequency measurements can be made, but significant errors may be obtained in the dynamic properties measured (see 10.2.1 and 10.2.2). The method is suitable for measuring dynamic storage moduli in the range 0,1 MPa to 50 MPa. Although materials with moduli greater than 50 MPa may be studied, more accurate measurements of their dynamic properties can be made using a torsional mode of deformation (see parts 2 and 7 of ISO 6721)."

Page 3, Subclause 9.5

Replace Note 3 by the following paragraph (grey shading indicates new text):

> "If the shear strain exceeds the limit for linear behaviour, then the derived dynamic properties will depend on the magnitude of the applied strain. This limit varies with the composition of the polymer and the temperature, and is typically in the region of 0,2 % for glassy plastics, but the effect is evident at very low dynamic strains in carbon-particle-filled rubbers. The dynamic strain range for linear behaviour can be explored by varying the dynamic displacement amplitude at a constant frequency and recording any change in dynamic stiffness with strain amplitude. A low frequency should be used for this purpose to minimize any temperature increase caused by mechanical loss. If non-linear behaviour is detected in the strain range of interest, the dynamic strain limit shall be recorded in the test report."

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