

# DIN EN ISO 6721-2:2019-09 (E)

## Plastics - Determination of dynamic mechanical properties - Part 2: Torsion-pendulum method (ISO 6721-2:2019)

---

Contents	Page
European foreword.....	4
Foreword .....	5
1 Scope .....	6
2 Normative references.....	6
3 Terms and definitions .....	6
4 Principle .....	6
5 Test apparatus.....	8
5.1 Pendulum.....	8
5.2 Inertial element.....	8
5.2.1 General.....	8
5.2.2 Method A (see Figure 1).....	8
5.2.3 Method B (see Figure 2).....	8
5.3 Clamps.....	8
5.4 Oscillation-inducing device .....	9
5.5 Oscillation-frequency and oscillation-amplitude recording equipment.....	9
5.6 Temperature-controlled chamber.....	9
5.7 Gas supply .....	9
5.8 Temperature-measurement device .....	9
5.9 Devices for measuring test-specimen dimensions.....	9
6 Test specimens.....	9
6.1 General.....	9
6.2 Shape and dimensions.....	9
6.3 Preparation .....	10
7 Number of specimens .....	10
8 Conditioning.....	10
9 Procedure.....	10
9.1 Test atmosphere.....	10
9.2 Measurement of specimen cross-section .....	10
9.3 Mounting the test specimens .....	10
9.4 Varying the temperature .....	10
9.5 Performing the test.....	10
10 Expression of results.....	11
10.1 Symbols and correction factors .....	11
10.2 Calculation of logarithmic decrement, $\Lambda$ .....	12
10.3 Calculation of torsional storage modulus, $G'_{\text{to}}$ .....	13
10.4 Calculation of torsional loss modulus, $G''_{\text{to}}$ .....	13
11 Precision.....	14
12 Test report.....	14

<b>Annex A (normative) Influence of longitudinal force, <math>W</math></b> .....	<b>15</b>
<b>Annex B (informative) Damping correction factor, <math>F_d</math></b> .....	<b>16</b>
<b>Annex C (informative) Dimensional correction factor, <math>F_c</math></b> .....	<b>17</b>
<b>Bibliography</b> .....	<b>18</b>