ISO 62:2008-02 (E)

Plastics - Determination of water absorption

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Principle 2

4 Apparatus 2

5 Test specimens 2
5.1 General 2
5.2 Square-shaped test specimens for homogeneous plastics 3
5.3 Test specimens of reinforced plastics affected by anisotropic diffusion effects 3
5.4 Tubular test specimens 3
5.5 Rod-shaped test specimens 4
5.6 Specimens cut from finished products, extrusion compounds, sheets or laminates 4

6 Test conditions and procedures 4
6.1 General 4
6.2 General conditions 4
6.3 Method 1: Determination of amount of water absorbed after immersion in water at 23 °C 5
6.4 Method 2: Determination of amount of water absorbed after immersion in boiling water 5
6.5 Method 3: Determination of water-soluble matter lost during immersion 6
6.6 Method 4: Determination of amount of water absorbed after exposure to 50 % relative humidity 6

7 Expression of results 6
7.1 Percentage by mass of water absorbed 6
7.2 Determination of the water content at saturation and the water diffusion coefficient using Fick's laws 7

8 Precision 8

9 Test report 9

Annex A (informative) Correlation between water absorption by test specimens and Fick's diffusion laws 10

Annex B (informative) Precision statement 12

Bibliography 15