ISO 12086-2:2006-02 (E)

Plastics - Fluoropolymer dispersions and moulding and extrusion materials - Part 2: Preparation of test specimens and det ermination of properties

Contents

Page

Foreword iv

1 Scope 1

2 Normative references 1

3 Terms and definitions 3

4 Abbreviated terms and symbols 4

5 Sampling 5

6 Preparation of test specimens 5

7 Conditioning and test conditions 5

8 General testing of fluoropolymers 5
8.1 Electrical properties 6
8.2 Mechanical properties 8
8.3 Thermal-transition temperatures 10
8.4 Density 11
8.5 Flammability by oxygen index 11
8.6 Particle size and size distribution 11

9 Testing of fluoropolymer dispersions 17
9.1 General 17
9.2 Preparation of test samples 18
9.3 Isolation of PTFE from dispersion 18
9.4 Coagulum in dispersions 19
9.5 Percentage polymer and surfactant in aqueous dispersion 19
9.6 PTFE solids content by hydrometer 20
9.7 pH of dispersions 21

10 Testing of PTFE and closely related materials 21
10.1 General 21
10.2 Preparation of test specimens by moulding 21
10.3 Bulk density 23
10.4 Extrusion pressure 27
10.5 Powder-flow time 32
10.6 Standard specific gravity (SSG), extended specific gravity (ESG) and thermal-instability index (TII) 34
10.7 Stretching-void index (SVI) 37

11 Testing of conventionally melt-processible fluoropolymers 38
11.1 Preparation of test specimens by moulding 38
11.2 Melt mass-flow rate (MFR) and melt volume-flow rate (MVR) 39

12 Other test methods used with fluoropolymers 41
12.1 Brittleness temperature of plastics and elastomers by impact 41
12.2 Coefficients of static and kinetic friction 41
12.3 Zero-strength time 41

Annex A (informative) Listing of test methods (alphabetical order) 42

Annex B (informative) Designatory properties for common fluoropolymer types with Bibliography . 45