

ISO 28641:2018 (E)

Rubber compounding ingredients — Organic chemicals — General test methods

Contents

	Foreword
1	Scope
2	Normative references
3	Terms and definitions
4	Abbreviated terms
5	General requirements
5.1	Thermometer
5.2	Desiccator
6	Sampling
6.1	Apparatus
6.2	Sampling method
7	Test methods
7.1	Density and relative density
7.1.1	General
7.1.2	Hydrometer method
7.1.2.1	Apparatus
7.1.2.2	Procedure
7.1.3	Pyknometer method
7.1.3.1	General
7.1.3.2	Apparatus
7.1.3.3	Method for liquid samples
7.1.3.3.1	Procedure
7.1.3.3.2	Calculation
7.1.3.4	Method for powder samples
7.1.3.4.1	Procedure
7.1.3.4.2	Calculation
7.1.4	Expression of results
7.1.5	Test report
7.2	Loss on heating
7.2.1	General
7.2.2	Method A
7.2.3	Method B
7.2.3.1	Apparatus
7.2.3.2	Procedure
7.2.4	Calculation
7.2.5	Expression of results
7.2.6	Precision
7.2.7	Test report
7.3	Sieve residue
7.3.1	General
7.3.2	Principle
7.3.3	Reagents
7.3.4	Apparatus
7.3.5	Procedure
7.3.6	Calculation
7.3.7	Expression of results

7.3.8	Precision
7.3.9	Test report
7.4	pH of water extract
7.4.1	Principle
7.4.2	Apparatus
7.4.3	Procedure
7.4.3.1	Preparation of test solution
7.4.3.1.1	General
7.4.3.1.2	Method A
7.4.3.1.3	Method B
7.4.3.2	Measurement
7.4.4	Test report
7.5	Melting point
7.5.1	General
7.5.2	Method A
7.5.3	Method B
7.5.3.1	Apparatus
7.5.3.2	Procedure
7.5.4	Method C
7.5.5	Expression of results
7.5.6	Precision
7.5.7	Test report
7.6	Temperature of solidification
7.6.1	Principle
7.6.2	Apparatus
7.6.3	Procedure
7.6.4	Expression of results
7.6.5	Test report
7.7	Softening point
7.7.1	General
7.7.2	Principle
7.7.3	Apparatus
7.7.4	Procedure
7.7.5	Expression of results
7.7.6	Precision
7.7.7	Test report
7.8	Density of the bulk material
7.8.1	Principle
7.8.2	Method A (constant mass method)
7.8.2.1	Apparatus
7.8.2.2	Procedure
7.8.2.3	Calculation
7.8.2.4	Expression of results
7.8.3	Method B (constant volume method)
7.8.3.1	Apparatus
7.8.3.2	Procedure
7.8.3.3	Calculation
7.8.3.4	Expression of results
7.8.4	Test report
7.9	Ash
7.9.1	Principle
7.9.2	Apparatus
7.9.3	Procedure
7.9.4	Calculation
7.9.5	Expression of results
7.9.6	Precision
7.9.7	Test report
7.10	Refractive index
7.10.1	Principle
7.10.2	Apparatus
7.10.3	Procedure
7.10.4	Expression of results
7.10.5	Precision
7.10.6	Test report

Annex A (normative) Verification of accuracy of pH-meter

- A.1 General
- A.2 Reagents
- A.3 Buffer solutions
 - A.3.1 Preparation
 - A.3.1.1 Phosphate buffer solution of nominal pH 7
 - A.3.1.2 Phthalate buffer solution of nominal pH 4
 - A.3.1.3 Borate buffer solution of nominal pH 9
 - A.3.1.4 Standard solution of pH less than 4
 - A.3.1.5 Standard solution of pH more than 9
 - A.3.2 pH-value at different temperatures
 - A.3.3 Storage
- A.4 Apparatus
- A.5 Verification
 - A.5.1 Cleaning the electrode
 - A.5.2 Temperature
 - A.5.3 Repeatability check
 - A.5.4 Linearity check

Annex B (normative) Calibration of the pH-meter

- B.1 General
- B.2 Buffer solutions
- B.3 Apparatus
- B.4 Calibration
 - B.4.1 General
 - B.4.2 Cleaning the electrode
 - B.4.3 Temperature
 - B.4.4 Calibration at pH 7
 - B.4.5 Calibration over the anticipated measurement range

Annex C (informative) Precision

- C.1 Loss on heating — Method B
- C.2 Sieve residue
- C.3 Melting point — Method A
- C.4 Softening point
- C.5 Ash
- C.6 Refractive index

Annex D (informative) Conversion formulae between density and relative density

- D.1 Relative-density hydrometer (graduated in 15/4 °C)
- D.2 Density hydrometer (graduated in 20 °C)

Page count: 41