ISO 30013:2011-10 (E)

Rubber and plastics hoses - Methods of exposure to laboratory light sources - Determination of changes in colour, appearance and other physical properties

Contents

Page

Foreword iv

1 Scope 1

2 Normative references 1

3 Terms and definitions 2

4 Principle 2

5 Test pieces 2
5.1 Types of test piece 2
5.2 Conditioning 3
5.3 Number of test pieces 4
5.4 Test piece holders 4
5.5 Radiation direction and radiation surface 4

6 Light sources and exposure cycles 7
6.1 General 7
6.2 Xenon-arc lamps 7
6.3 Fluorescent UV lamps 10
6.4 Open-flame carbon-arc lamps 12

7 Procedure 14
7.1 General 14
7.2 Mounting the test pieces 14
7.3 Exposure 14
7.4 Measurement of radiant exposure 15
7.5 Removal and inspection of test pieces 15

8 Expression of results 16
8.1 Cracking and appearance 16
8.2 Changes in colour 16
8.3 Changes in physical properties 16

9 Test report 16

Annex A (informative) Properties for assessing changes in hose materials after exposure 18

Annex B (informative) Guidance on selection of light sources 19

Annex C (informative) Recommended types of test piece for determining typical properties 20

Bibliography 21