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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 18950-2023

Replacing GB/T 18424-2001, GB/T 18950-2003

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

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1. Structure and Drafting Rules of Standardization Documents"

Drafting.

This document replaces GB/T 18424-2001 "Determination of color and appearance changes of rubber and plastic hoses exposed to xenon arc lamp" and

GB/T 18950-2003 "Determination of static UV resistance of rubber and plastic hoses". This document is consistent with GB/T 18424-2001 and

Compared with GB/T 18950-2003, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

---Added a chapter of "Terms and Definitions" (see Chapter 3);

--- Added "measurement of changes in selected physical properties" to the test principle (see Chapter 4, Appendix C);

---Added type 4 specimens among the specimen types (see 5.1);

---The calculation formula for the length of type 1 specimen has been changed (see 5.1.2, 4.1.1 of GB/T 18950-2003);

---Added "open carbon arc lamp" light source and exposure cycle (see 6.4);

---Changed the requirements for xenon arc lamp test temperature, test chamber relative humidity and test time (see 6.2.2.1, GB/T 18424-2001

of 6.4);

---Changed the requirements for fluorescent UV lamp test temperature, test chamber relative humidity and test time (see 6.3.2.1, GB/T 18950-

Chapter 7 of.2003);

--- Added requirements for specimen installation (see 7.2);

---Deleted the protection of operators (see Appendix A of GB/T 18424-2001);

---Deleted the water spray device (see Appendix B of GB/T 18424-2001);

---Deleted the use of blue fabric samples to determine the exposure level (see Appendix C of GB/T 18424-2001).

This document is equivalent to ISO 30013.2011 "Laboratory light source exposure test method for rubber and plastic hoses. Color, appearance and other Determination of changes in physical properties".

This document has made the following minimal editorial changes.

---Normative reference document ISO 7724-3 has been replaced by ISO 11664-4 in.2019 (see 8.2, ISO 30013.2011 Chapter 2

Note 2), this document directly references ISO 11664-4.

Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents.

1 Scope

This document describes the procedures for exposing rubber and plastic hoses to 3 laboratory light sources. xenon arc lamp, fluorescent UV lamp, and open carbon arc lamp. method.

These methods simulate hoses used in outdoor environments (see Method A for xenon arc lamp exposure, Method A for fluorescent UV lamp exposure, open

For carbon arc lamp exposure, see Type 1 filter) or when used in an indoor environment (xenon arc lamp exposure, see Method B, for fluorescent UV lamp exposure, see Method B Method B, open carbon arc lamp exposure method (see type 2 filter) exposure conditions.

This document specifies four types of test specimens (two types each for stress-bearing and non-stress-bearing types during exposure). Using 3 kinds of light sources and not

It is not possible to compare results obtained with the same exposure conditions.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations

For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to

this document.

GB/T 16422.2-2022 Plastic laboratory light source exposure test methods Part 2.Xenon arc lamp (ISO 4892-2.2013,

IDT)

GB/T 16422.3-2014 Plastic laboratory light source exposure test methods Part 3.Fluorescent ultraviolet lamp (ISO 4892-3.

2006,IDT)

GB/T 16422.4-2014 Plastic laboratory light source exposure test methods Part 4.Open carbon arc lamp (ISO 4892-4.

2004,IDT)

GB/T 24134-2009 Evaluation of ozone resistance of rubber and plastic hoses under static conditions (ISO 7326.2006, IDT)

ISO 105-A02 Textiles Color Fastness Test Part A02.Gray Sample Card for Evaluating Discoloration (Textiles-Testsforcolour

Note. GB/T 250-2008 Gray sample card for evaluating discoloration in textile color fastness testing (ISO 105-A02.1993, IDT)

conditioningandtesting)

Note. GB/T 2918-2018 Standard environment for conditioning and testing of plastic specimens (ISO 291.2008, MOD)

ISO 4582 Determination of color changes and changes in properties of plastics after exposure to sunlight through glass, natural weathering or laboratory light sources

Note. GB/T 15596-2021 Determination of color and performance changes of plastics after exposure to solar radiation, natural climate or laboratory radiation sources after glass filtration

(ISO 4582.2017,IDT)

weathering)

Note. GB/T 3511-2018 Weathering resistance of vulcanized rubber or thermoplastic rubber (ISO 4665.2016, IDT)