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

GB/T 18422-2013

Replacing GB/T 18422-2001

**Rubber and plastics hoses and hose assemblies --
Determination of permeability to gas**

橡胶和塑料软管及软管组合件 透气性的测定

(English Translation)

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Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
- 4 Sample
- 4.1 Method 1
- 4.2 Method 2

Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard replaces GB/T 18422-2001 "Rubber and plastics hoses and hose assemblies - Determination of permeability", and GB/T 18422-2001 main technical changes compared as follows.

- Normative documents referenced file has changed (see Chapter 2, Chapter 2, 2001 edition);
- Increased terms and definitions (see Chapter 3);
- Remove the GB/T 18422-2001 Figure 1 "A-side" and "Legend" (2001 see map 1);
- Increased requirements for test gas (see Chapter 7);
- Modified test procedure (see Chapter 10, Chapter 8 edition 2001);

This standard uses the translation method identical with ISO 4080:2009 "Rubber and plastic hoses and hose assemblies - Determination of permeability." the standard international normative documents referenced in the correspondence between the consistency of the following documents.

- GB/T 7528-2011 Rubber and plastic hoses and hose assemblies terminology (ISO 8330:2007, IDT);
- GB/T 2941-2006 rubber physical test method for preparing and conditioning General procedures (ISO 23529:2004, IDT).

This standard made the following editorial changes.

- The international unit bar to MPa.

The standard proposed by China Petroleum and Chemical Industry Association.

This standard by the National Rubber and rubber products hose Standardization Technical Committee Technical Committee (SAC/TC35/SC1) centralized.

1 Scope

This standard specifies the three measurement methods through rubber or plastic hose reinforced hose or a specific time of the gas volume.

Method 1. In addition to measuring the entire outer ends of the hose connector hose or reinforced hose to test gas permeability. Permeability of the hose or Enhanced calculate the length of the hose.

Method 2. Determination of permeability hose/hose connector contact surfaces. When the hose outer cover layer without needling, gas is usually from the fabric reinforcing layer Exudation cut end, this time using this method. Permeability calculated by the length of the hose.

Method 3. Accurate measurement hose or hose assemblies to test gas permeability. Calculated by the surface area of the hose permeability innerliner.

This standard applies only to water-insoluble gas.

Note 1: Although the results of Tier 1 and Tier 2 are represented by the same unit, but did not use the same piercing and pierced hoses have been obtained no results comparison Necessary because different tests prescribed time, whereby different permeability.

Note 2: Method 3 is the preferred method.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

ISO 8330 Rubber and plastics hoses and hose assemblies term
(Rubberandplasticshosesandhose assemblies-Vocabulary) ISO 23529 rubber physical test method for preparing and conditioning the general procedure
(Rubber-Generalproceduresfor preparingandconditioningtestpiecesforphysicaltestmethods)

3 Terms and Definitions

Terms and definitions, as defined in ISO 8330 apply to this document.

4.1 Method 1

As a sample with a hose or reinforced hose should be long enough to ensure that exposure to the gas collection tank hoses or reinforced hose length 1m.

Note: The outer cladding tube specimens may be puncture.

4.2 Method 2

No sample should be fitted with a hose terminal fittings without acupuncture or non-reinforced hose. Free length between the joints should be