



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

GB/T 3683-2023

**Rubber hoses and hose assemblies - Wire-braid-reinforced
hydraulic types for oil-based or water-based fluids -
Specification**

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Foreword

This Document was drafted as per the rules specified in GB/T 1.1-2020 Directives for Standardization - Part 1. Rules for the Structure and Drafting of Standardizing Documents.

This Document replaced GB/T 3683-2011 Rubber Hoses and Hose Assemblies - Wire-Braid-

Reinforced Hydraulic Types for Oil-Based or Water-Based Fluids - Specification. Compared with GB/T 3683-2011, the major technical changes of this Document are as follows besides t

he structural adjustments and editorial modifications.

--- Change "R1ATS" to "R1AT"; and change "R2ATS" to "R2AT" (see Clause 4, 6.1, Clause

7 of this Edition; Clause 4, 6.2, Clause 7 of the 2011 Edition);

--- Change the scope; increase the upper limit temperature of water-based hydraulic fluid from +60 degrees C to +70 degrees C; and add the relevant requirements for the fluid medium to be

water (see Clause 1 of this Edition; Clause 1 of the 2011 Edition);

--- Add hoses with a nominal inner diameter of 76 and relevant requirements (see 6.1 of this

Edition);

--- Change the maximum working pressure, verification pressure and minimum burst pressure in Table 4 to the most common standard pressure (see 7.2 of this Edition; 7.2 of the 2011 Edition);

--- Change the measurement method of the minimum bending radius (see 7.3 of this Edition);

7.3 of the 2011 Edition);

--- Change the fluid temperature of the water-based fluid pulse test from +60 degrees C to +70 degrees C;

incorporate the "optional pulse test" into it (see 7.4.2 of this Edition; 7.4.3 of the 2011 Edition);

--- Add the specimen model "Type 8" for the measurement of bonding strength between the outer covering layer and the reinforcement layer (see 7.7 of this Edition);

--- Add the requirements for wear resistance (see 7.9 of this Edition);

--- Change the immersion temperature requirement for water resistance from +60 degrees C to +70 degrees C

(see 7.10.3 of this Edition; 7.10 of the 2011 Edition);

--- Add the frequency of inspections in Clause 8 (see Clause 8 of this Edition);

--- Change some marking requirements (see Clause 9 of this Edition; Clause 8 of the 2011 edition).

This Document equivalently adopts ISO 1436.2020 Rubber Hoses and Hose Assemblies - Wire-

Braid-Reinforced Hydraulic Types for Oil-Based or Water-Based Fluids - Specification.

This Document made the minimum editorial modifications as follows.

--- ISO 1436.2020 does not provide clear values for the outer diameter, minimum outer cladding thickness, and maximum outer cladding thickness of the 2SN and R2AT types with a nominal inner diameter of 76. This Document gives the outer diameter reference value to be 96.6mm, the minimum outer cladding thickness reference value to be 1.3mm,

the maximum outer cladding thickness reference value to be 2.5mm (see 6.1 of this Edition);

--- Delete the "bar" unit expression in the text and only retain the "MPa" unit expression.

Please note some contents of this Document may involve patents. The issuing agency of this

Document shall not assume the responsibility to identify these patents.

This Document was proposed by China Petroleum and Chemical Industry Federation.

This Document shall be under the jurisdiction of Hose Subcommittee of National Technical Committee on Rubber & Rubber Products of Standardization Administration of China (SAC/TC 35/SC 1).

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2006; GB/T 3683-2011 was second-time revised in 2011; and it is the third-time revised now.

Rubber Hoses and Hose Assemblies - Wire-Braid-Reinforced Hydraulic Types for Oil-Based or Water-Based Fluids - Specification

1 Scope

This Document specifies the requirements for 6 types of steel wire braided reinforced hoses and hose assemblies with nominal inner diameters of 5 ~ 51. This Document also specifies Type-2SN and Type-R2AT hoses with a nominal inside diameter of 63 and Type-2SN hose with a nominal inside diameter of 76.

2 Normative References

The provisions in following documents become the essential provisions of this Document through reference in this Document. For the dated documents, only the versions with the dates

indicated are applicable to this Document; for the undated documents, only the latest version

(including all the amendments) is applicable to this Document.

3 Terms and Definitions

For the purposes of this Document, the terms and definitions given in ISO 8330 apply.

4 Classification

According to different structures, working pressure and oil resistance, hoses are divided into 6 types.