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

GB/T 30661.6-2022

**Wheelchair seating - Part 6: Simulated use and determination of
the changes in properties of seat cushions**

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foreword

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

drafted.

This document is part 6 of GB/T 30661 "Wheelchair Vehicle Seats". GB/T 30661 has released the following parts.

- Part 1. Vocabulary, datum axis rules and measurements of body parts, postures and posture support surfaces;
- Part 2. Physical and mechanical properties of the device for maintaining tissue integrity - Determination of seat cushions;
- Part 3. Determination of static, impact and fatigue strength of postural support devices;
- Part 4. Seating systems used in motor vehicles;
- Part 6. Determination of simulated use and changes in cushion performance.

This document is modified to adopt ISO 16840-6:2015 "Wheelchair seats - Part 6. Simulated use and determination of changes in seat cushion performance".

The technical differences between this document and ISO 16840-6:2015 and their reasons are as follows.

--- In Chapter 2, the normative reference document adds a reference to ISO 16840-12 (see 9.2), using ANSI/RESNASS-1:2019

Section 3 replaces RESNASS-1:2011 Section 3 (see 5.1.2, 11.2) to suit industry needs;

--- Changed the requirements for heat and humidity test device in 5.1.2 to "This system should be consistent with the provisions of ANSI/RESNASS-1:2019 Section 3

same" to suit industry needs;

--- Deleted the provisions of testing in accordance with ISO 16840-7 in 11.2, and changed it

to "according to ANSI/RESNASS-1.2019

The methods specified in Section 3 are tested" to suit industry needs.

The following editorial changes have been made to this document.

--- Increased the unit "CFU/mL" of the total number of colonies (see 23.2.1).

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

The seat cushion of the wheelchair can improve the support state of the user and avoid injury, so it can be used for the disabled of various degrees in different ways.

request to use. The use of a wheelchair seat cushion depends on its ability to cope with various situations, such as intermittent use, high-intensity exercise use or size

Use by incontinent persons. Each different usage condition changes the performance of the seat cushion and puts the user at potential risk of affecting the seat cushion

See Appendix A for the reasons for the change in performance. It is therefore crucial to assess the criteria for using wheelchair seat cushions under different conditions.

This document describes a method for determining changes in the physical and mechanical properties of a seat cushion based on its age and use. Tests given in this document

Methods are not fully applicable to all seat cushions, therefore, manufacturers need to determine which test methods are applicable to the construction and use of their products. This article

Pieces are intended to provide an approximation of conditions that change over time. This document covers performance testing of new seat cushions,

After the mat is aged, the performance test is carried out, and the report of the change is given at last.

Before the implementation of this document, the manufacturer gives the use environment, failure mode and performance test of its product suitable for its seat cushion. not all test

Tests are suitable for all seat cushions, and some tests may be modified or even cancelled based on material suitability, construction or conditions of use. if yes

Cyclic loads add a rotational component to create additional wear. The failure mode of seat cushions of some materials will depend on the temperature at a temperature of 70 °C.

However, in this case, it may be necessary to select a temperature of 50°C to age the seat cushion for a longer period of time to simulate aging failure.

All changes should be described in the published documentation.

These tests are not intended to rank or score seat cushions or to configure them to individual user requirements. conclusion of these tests

The results help clinicians provide care to patients by using their professional judgment to select the surface characteristics of the seat cushion, and also assist in patient care, treatment, and treatment.

treatment or rehabilitation. The association of seat cushions with clinical outcomes, although present, has not been validated. Once the clinical relationship is confirmed, this document will have new

develop. Subsequent parts of GB/T 30661 will describe other qualitative test methods for surface characteristics, which may improve the care and treatment of patients.

One step to help clinicians.

Over the past few decades, wheelchair seats have continued to evolve as a subspecialty of rehabilitation services. this kind of research

Involves wheelchair seat product selection, production, and service supply, so as to provide wheelchair users with better body support, motion control, and predictability.

Injury prevention. GB/T 30661 is intended to consist of 11 parts.

- Part 1.Vocabulary, datum axis rules and measurements of body parts, postures and posture support surfaces;
- Part 2.Physical and mechanical properties of the device for maintaining tissue integrity - Determination of seat cushions;
- Part 3.Determination of static, impact and fatigue strength of postural support devices;
- Part 4.Seating systems used in motor vehicles;
- Part 6.Determination of simulated use and changes in seat performance;
- Part 9.Guidelines for the clinical interface pressure distribution of seat cushions;
- Part 10.Requirements and test methods for the flame retardancy of postural support devices;
- Part 11.Seat cushion perspiration performance test for maintaining tissue integrity;
- Part 12.Description of the envelope and trapping characteristics of seat cushions tested using a double hemispherical loading body;
- Part 13.Determination of the lateral stability of seat cushions;
- Part 15.Selection, placement and fixation of flexible postural support devices in seats.

Wheelchair car seats part 6.simulated use and

Determination of changes in seat cushion performance

1 Scope

This document gives test setups, test methods and information releases for the effects of aging in seat cushions to reproduce the aging seen in use

In addition, a method to determine the changes in physical and mechanical properties of the seat cushion according to its age and use and a set of tests to simulate wear are also given.

Abrasion tests can be used to verify warranty claims and provide information about the product, age, performance limitations.

2 Normative references

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

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

ISO /IEC Guide 98-3 Uncertainty of Measurement Part 3.Guidelines for the Expression of Uncertainty of Measurement [Uncertaintyof

ting-Specifications)

ISO 4892-3 Test methods for light sources in plastics laboratories - Part 3.UV fluorescent lamps (Plastics-Methods ofex-

ISO 9073-8 Test methods for textile nonwovens - Part 8.Determination of liquid penetration time (simulated urine)

later urine)]

Note. GB/T 24218.8-2010 Test methods for textiles and nonwovens - Part 8.Determination of liquid penetration time (simulated urine) (ISO 9073-8.

1995, MOD)

ISO 16840-2 Wheelchair seats - Part 2.Determination of physical and mechanical properties of devices for maintaining tissue integrity Seat cushions

Note. GB/T 30661.2-2014 Wheelchair Seat Part 2.Determination of Physical and Mechanical Properties of Devices for Maintaining Tissue Integrity Seat Cushion