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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 30661.13-2024

Wheelchair seating - Part 13: Determination of the lateral stability property of a seat cushion

轮椅车座椅 第13部分：座垫侧向稳定性的测定

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Standardization Administration of the PRC

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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 for standardization documents" Drafting. This document is part 13 of GB/T (Z) 30661 "Wheelchair Seats". GB/T (Z) 30661 has been published in the following parts.

1.Vocabulary, reference axis rules and measurement of body parts, body positions and body support surfaces;

2.Determination of the physical and mechanical properties of devices for maintaining tissue integrity;

3.Determination of static, impact and fatigue strength of body support devices;

4.Seat systems for use in motor vehicles;

6.Simulated use and determination of changes in seat cushion performance;

13.Determination of lateral stability of seat cushions. This document is equivalent to ISO 16840-13.2021 "Wheelchair seats - Part

13.Determination of lateral stability of seat cushions". Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document is issued by the Ministry of Civil Affairs of the People's Republic of China. This document is under the jurisdiction of the National Technical Committee for Standardization of Rehabilitation and Special Equipment for Persons with Disabilities (SAC/TC148). This document was drafted by: National Rehabilitation Assistive Devices Research Center, National Rehabilitation Assistive Devices Research Center Rehabilitation Assistive Devices Quality Supervision and Inspection Center, Shenzhen SASAC Technology Co., Ltd. and Shanghai Hubang Intelligent Rehabilitation Equipment Co., Ltd. The main drafters of this document are Gu Huiru, Zhang Weikang, Yun Xiao, Peng Shuiping and Zhao Cishun.

Wheelchair Seats is a standard that ensures the performance and quality of wheelchair seats and accurately provides these performance and quality to stakeholders. The users of chairs and vehicles want to know the performance and quality of the products, the manufacturers want to know how to achieve better quality, and the inspection agencies want to know how to achieve better quality. Know how to inspect the product. Because the Wheelchair Seat is too long, and the parties using the document generally only need part of it. The content is too complex and the updates of each part will not be synchronized, so it is compiled in parts and is intended to consist of the following parts.

1.Vocabulary, reference axis rules and measurement of body parts, body positions and body support surfaces;

2.Determination of the physical and mechanical properties of devices for maintaining tissue integrity;

3.Determination of static, impact and fatigue strength of body support devices;

4.Seat systems for use in motor vehicles;

1 Scope

GB/T 30661.13-2024 specifies the determination of the lateral stability of a wheelchair seat cushion. Lateral stability is the property that decides whether a user who cannot correct their own posture stays upright: a cushion that is soft enough to relieve pressure but that lets the pelvis slide sideways produces the postural asymmetry, and eventually the scoliosis and the pressure injury, that the cushion was prescribed to prevent. It is also a property that manufacturers describe in words rather than numbers. The standard gives a method that measures it. It sets the principle, the test apparatus including the loading indenter and the

lateral displacement mechanism, the specimen and its conditioning and mounting, the preload and the lateral loading procedure, the measurement of the displacement and the restoring force, the calculation of the stability index and its expression, the precision and the test report. It takes effect on 1 January 2025.

This document specifies equipment, test instruments and methods for determining the lateral stability of a wheelchair seat cushion by measuring the response of the seat cushion to a shift in the centre of gravity of a load placed on the cushion. It provides a method for determining specific physical and mechanical property changes in seat cushions. It is not intended for specific individual users. Provides information on specific cushioning performance. It does not provide information related to fore-aft stability, nor does it provide information on the stability effect with the edge of the seat cushion. Related information. NOTE

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document. ISO 7176-

26 Wheelchairs-Part

GB/T 18029.26-2014 Wheelchairs Part

26.Terminology (ISO 7176-26.2007, IDT)

ISO 16840-2.2018 Wheelchair seats - Part

2.Determination of physical and mechanical properties of devices for maintaining tissue integrity - Seat cushions

GB/T 30661.2-2014 Wheelchair seats Part

2.Determination of physical and mechanical properties of devices for maintaining tissue integrity Seat cushions (ISO 16840- 2.2007,IDT)

3 Terms and definitions

For the purposes of this document, the terms and definitions defined in ISO 16840-2.2018 and ISO 7176-26 and the following apply.

3.1 The seat cushion has the ability to prevent the pelvis from tilting in the frontal plane due to the lateral shift of the passenger's center of gravity.

3.2 A device applied to the test seat that can be translated in a horizontal plane during the

test so that the center of gravity of the load moves relative to the test seat gross weight.

Note. Numbers 4 to 6 in Figure 1 are examples of live loads.

3.3 The total weight of the equipment applied to the test cushion which will not move in the horizontal plane relative to the test cushion during the test