INTERNATIONAL STANDARD

ISO 10542-4

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Technical systems and aids for disabled or handicapped persons — Wheelchair tiedown and occupant-restraint systems —

Part 4: Clamp-type tiedown systems

Assistances et aides techniques pour les personnes invalides ou handicapées — Systèmes d'attache du fauteuil roulant et de retenue de l'occupant —

Partie 4: Systèmes de fixation par crampon

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 10542-4 was prepared by Technical Committee ISO/TC 173, *Assistive products for persons with disability*, Subcommittee SC 1, *Wheelchairs*.

ISO 10542 consists of the following parts, under the general title *Technical systems and aids for disabled or handicapped persons — Wheelchair tiedown and occupant-restraint systems*:

— *Part 1: Requirements and test methods for all systems*

— *Part 2: Four-point strap-type tiedown systems*

— *Part 3: Docking-type tiedown systems*

— *Part 4: Clamp-type tiedown systems*

— *Part 5: Systems for specific wheelchairs*

Introduction

Providing effective crash protection for the wheelchair-seated occupant of a motor vehicle usually requires that equipment be installed to secure the wheelchair and restrain the occupant of the wheelchair. ISO 10542-1 gives general requirements for all wheelchair tiedown and occupant-restraint systems (WTORS). The provisions of ISO 10542-1 apply except as amended and supplemented by this part of ISO 10542 which gives particular requirements and test procedures for WTORS and their sub-assemblies and components that use a mechanical clamp-type system to secure the wheelchair in a vehicle.

Technical systems and aids for disabled or handicapped persons — Wheelchair tiedown and occupant-restraint systems —

Part 4: Clamp-type tiedown systems

1 Scope

This part of ISO 10542 specifies test methods and requirements for design and performance, instructions to installers and users, and product marking and labelling of wheelchair tiedown and occupant-restraint systems (WTORS).

It is applicable only to WTORS that use clamp-type tiedown to secure wheelchairs when used as a forward facing seat by an adult passenger or driver of a motor vehicle.

This part of ISO 10542 is applicable primarily to complete WTORS, but a portion of this part of ISO 10542 can also be applied to components and sub-assemblies sold separately and for replacement parts.

This part of ISO 10542 is applicable to WTORS intended for use with all types of manual and powered wheelchairs, including scooters with three or more wheels.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 10542-1:2001, *Technical systems and aids for disabled or handicapped persons — Wheelchair tiedown and occupant-restraint systems — Part 1: Requirements and test methods for all systems*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

clamp-type tiedown

method of wheelchair tiedown or securement that uses only mechanical linkages and/or grips requiring manual positioning and tensioning of the end fittings to the wheelchair

3.2

wheelchair securement adaptor

hardware that is attached temporarily or permanently to the wheelchair frame to accommodate wheelchair securement by a wheelchair tiedown