ISO 19894:2019 (E)

Walking trolleys — Requirements and test methods

Contents

Foreword

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 General requirements and test methods

- 4.1 Risk analysis
- 4.2 Intended performance
- 4.3 Clinical evaluation and investigation
- 4.4 Walking trolleys that can be dismantled
- 4.5 Fasteners
- 4.6 User mass/load limits
- 4.7 Apparatus
- 4.8 Test conditions

5 Materials

- 5.1 General
- 5.2 Flammability
- 5.2.1 General
- 5.2.2 Upholstered parts and moulded parts
- 5.3 Biocompatibility and toxicity
- 5.4 Infection and microbiological contamination
- 5.4.1 Cleaning and disinfection
- 5.4.2 Resistance against temperature alternations
- 5.4.3 Animal tissue
- 5.5 Resistance to corrosion

6 Ingress of liquids

- 6.1 Ingress of liquids
- 6.1.1 Requirements
- 6.1.2 Test method

7 Temperatures of parts that come in contact with human skin

8 Safety of moving and folding parts

- 8.1 Squeezing
- 8.2 Mechanical wear

9 Prevention of traps for parts of the human body

- 9.1 Holes and clearances
- 9.2 V-shaped openings

10 Folding and adjusting mechanisms

- 10.1 General
- 10.2 Locking mechanisms
- 10.3 Folding function
- 10.3.1 Requirements
- 10.3.2 Retaining test and strength test of folding mechanism

11 Lifting and carrying means

11.1 General
11.2 Requirement
11.3 Test method

12 Strength, torque, durability

12.1 Strength of the resting seat
12.1.1 Requirements
12.1.2 Strength test of the resting seat
12.2 Strength of the arm support
12.2.1 Requirements
12.2.2 Strength test of the arm support
12.3 Torque of the handle
12.3.1 Requirements
12.3.2 Torque test of the handle
12.4 Running durability
12.4.1 Requirements
12.4.2 Running durability test

13 Appearance (Surfaces, corners, edges and protruding parts)

14 Stability

14.1 Requirements for static stability on slope
14.2 Test method for static stability on slope
14.2.1 Forward stability test
14.2.2 Rearward stability test
14.2.3 Lateral stability test
14.3 Requirements for stability and strength when the handle is loaded
14.4 Stability test and strength test when the handle is loaded
14.4.1 In the case of unified-type handle
14.4.2 In the case of separated-type handles
14.5 Requirements for stability in a horizontal position when the resting seat is loaded
14.6 Stability test in a horizontal position when the resting seat is loaded

15 Forces in soft tissues of the human body

16 General structure

16.1 Structure
16.2 Brakes
16.2.1 Requirements of running brakes
16.2.2 Braking test of the running brakes
16.2.3 Requirements of parking brakes
16.2.4 Braking test of the parking brakes

17 Ergonomic principles

18 Information supplied by the manufacturer

18.1 General
18.2 Markings or labelling
18.3 Instruction manual

19 Packaging

20 Test report

Annex A (informative) Consideration items for hazards when designing the products

A.1 Hazards and their factors that are supposed on general assistive products
A.2 Hazards from ergonomic factors of various users
A.3 Hazards originating from mechanical damage, insufficient maintenance and/or aging

Annex B (informative) Rationale

Annex C (informative) Environmental and consumer-related requirements

C.1 Assessment of hazardous substances in walking trolleys for persons with disability — General aspects
C.2 Hazardous substances in all materials or products
C.2.1 Substances of very high concern (SVHC): the European approach on chemicals
C.2.1.1 General
C.2.1.2 CMR chemicals
C.2.1.3 PBT and vPvB substances
C.2.1.4 Substances of equivalent concern
C.2.2 Recommendations
C.2.2.1 General
C.2.2.2 CMR chemicals
C.2.2.3 PBT and vPvB substances
C.2.2.4 Substances of equivalent concern
C.3 Hazardous substances in textiles
C.3.1 Relevant substances
C.3.2 Recommendation
C.4 Hazardous substances in plastic materials
C.4.1 Relevant substances
C.4.2 Recommendation
C.4.2.1 Substances based on lead, cadmium, mercury and their compounds or tin organic compounds
C.4.2.2 Organic halogenated compounds
C.4.2.3 Phthalates
C.5 Metals
C.5.1 Relevant substances
C.5.2 Recommendations
C.6 Wood
C.6.1 Relevant substances
C.6.2 Recommendations

Page count: 42