

AS 2316.1.3:2021  
EN 12572-3:2017



STANDARDS  
Australia

# Artificial climbing structures and challenge courses

## Part 1.3: Safety requirements and test methods for climbing holds

*This national standard is the identical adoption of EN 12572-3:2017 with the permission of the European Committee for Standardization – CEN, Rue de la Science 23, B – 1040 Brussels, Belgium.*



currently in preview, click buy full version

AS 2316.1.3:2021

This Australian Standard® was prepared by SF-047, Artificial Climbing Structures. It was approved on behalf of the Council of Standards Australia on 17 June 2021.

This Standard was published on 30 June 2021.

The following are represented on Committee SF-047:

- Australian Amusement Leisure & Recreation Association
- Australian Camps Association
- Boulder Gyms Australia
- Christian Venues Association
- Engineers Australia
- Indoor Climbing Industry Australia
- Outdoor Council of Australia
- Scouts Australia
- Sport and Recreation Victoria

This Standard was issued in draft form for comment as DR AS 2316.1.3:2021.

#### **Keeping Standards up-to-date**

Ensure you have the latest versions of our publications and keep up-to-date about Amendments, Rulings, Withdrawals, and new projects by visiting:

[www.standards.org.au](http://www.standards.org.au)

ISBN 978 1 76113 425 8

# Artificial climbing structures and challenge courses

## Part 1.3: Safety requirements and test methods for climbing holds

First published as AS 2316.1.3:2021.

### **COPYRIGHT**

© CEN 2021 — All rights reserved  
© Standards Australia Limited 2021

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher, unless otherwise permitted under the Copyright Act 1968 (Cth).

## Preface

This Standard was prepared by the Standards Australia Committee SF-047, Artificial Climbing Structures.

The objective of this document is to specify the safety requirements and test methods for climbing holds. This document is applicable to climbing holds, which are used for the natural progression of the climber, i.e. without the use of artificial means (e.g. ice axes, crampons, hooks, nuts) on artificial climbing structures (ACS) and bouldering walls. Climbing holds are designed to be mounted on the ACS with bolts, screws, etc. Climbing holds include large volumes or features that are designed for use without additional climbing holds being attached to them. The main fixation points for climbing holds forms part of the existing layout of the ACS and are considered in EN 12572-1 and EN 12572-2. This document is not applicable to ice climbing, dry tooling and playground equipment.

This document is identical with, and has been reproduced from, EN 12572-3:2017, *Artificial climbing structures — Part 3: Safety requirements and test methods for climbing holds*.

As this document has been reproduced from an International Standard, the following applies.

- (a) In the source text “this European Standard” should read “this document”.
- (b) A full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

NOTES

Currently in preview, click buy full version

# Contents

Page

<b>European foreword</b> .....	<b>3</b>
<b>Introduction</b> .....	<b>4</b>
<b>1 Scope</b> .....	<b>5</b>
<b>2 Normative references</b> .....	<b>5</b>
<b>3 Terms and definitions</b> .....	<b>5</b>
<b>4 Size classification</b> .....	<b>6</b>
<b>5 Safety requirements</b> .....	<b>7</b>
<b>5.1 General</b> .....	<b>7</b>
<b>5.2 Material</b> .....	<b>7</b>
<b>5.3 Ergonomic requirements</b> .....	<b>7</b>
<b>5.4 Resistance to fixation force</b> .....	<b>7</b>
<b>5.5 Resistance to breakage in use</b> .....	<b>7</b>
<b>5.6 Dimension ratio</b> .....	<b>7</b>
<b>5.7 Volumes</b> .....	<b>8</b>
<b>6 Test methods</b> .....	<b>9</b>
<b>6.1 Sample preparation</b> .....	<b>9</b>
<b>6.2 Resistance to fixation force</b> .....	<b>9</b>
<b>6.3 Structural integrity</b> .....	<b>10</b>
<b>6.3.1 Holds</b> .....	<b>10</b>
<b>6.3.2 Structural integrity of volumes</b> .....	<b>10</b>
<b>7 Information to be provided by the manufacturer/supplier</b> .....	<b>11</b>
<b>8 Marking</b> .....	<b>11</b>
<b>Annex A (informative) Setup for testing of the structural integrity</b> .....	<b>12</b>
<b>Bibliography</b> .....	<b>13</b>

## European foreword

This document (EN 12572-3:2017) has been prepared by Technical Committee CEN/TC 136 “Sports, playground and other recreational facilities and equipment”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 2017, and conflicting national standards shall be withdrawn at the latest by July 2017.

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

This document supersedes EN 12572-3:2008.

This standard EN 12572, *Artificial climbing structures*, consists of the following parts:

- *Part 1: Safety requirements and test methods for ACS with protection points*
- *Part 2: Safety requirements and test methods for bouldering walls*
- *Part 3: Safety requirements and test methods for climbing holds*

The following technical changes have been made in comparison with EN 12572-3:2008:

- size classification and hold size has been added;
- safety requirements and test methods has been modified;
- setup for test the structural integrity have been added.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## Introduction

The working group recognize that there is a potential danger to ACS users from being struck by falling pieces of climbing holds that break whilst in use on an ACS. Some propriety systems within climbing holds have been developed by manufacturers in response to this problem but the systems have not been perfected and further development work is required. The aim is to develop a system that would prevent 'large' pieces of a broken hold that could cause serious injury to ACS users, from being able to 'break-off' and fall from the ACS.

Designers and manufacturers are requested to work on new systems that would address this problem.

## 1 Scope

This European Standard specifies the safety requirements and test methods for climbing holds.

This European Standard is applicable to climbing holds, which are used for the natural progression of the climber, i.e. without the use of artificial means (e.g. ice axes, crampons, hooks, nuts) on artificial climbing structures (ACS) and bouldering walls. Climbing holds are designed to be mounted on the ACS with bolts, screws, etc. Climbing holds include large volumes or features that are designed for use without additional climbing holds being attached to them. The main fixation points for climbing holds forms part of the existing layout of the ACS and are considered in EN 12572-1 and EN 12572-2.

This European Standard is not applicable to ice climbing, dry tooling and playground equipment.

## 2 Normative references

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

EN 12572-1, *Artificial climbing structures - Part 1: Safety requirements and test methods for ACS with protection points*

EN 12572-2, *Artificial climbing structures - Part 2: Safety requirements and test methods for bouldering walls*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12572-1 and EN 12572-2 and the following apply.

### 3.1

#### **artificial climbing structure (ACS)**

sports equipment consisting of a purpose-built climbing structure, which shows various construction characteristics, and is designed for various uses in sport climbing objectives

### 3.2

#### **bouldering wall**

artificial climbing structure allowing climbing without protection points including a falling space and impact area

### 3.3

#### **protection point**

attachment point on the ACS designed to protect the climber

Note 1 to entry: It can be permanent (cannot be removed with tools, e.g. a glue in anchor) or non-permanent (removable with tools, e.g. a hanger).

### 3.4

#### **hold**

removable climbing component used for progression on an ACS or bouldering wall including bigger three dimensional, structural attachment without additional panel insert or other means of hold fixation