

BS EN 16804:2015



BSI Standards Publication

# Diving equipment — Diving open heel fins — Requirements and test methods

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**National foreword**

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English Version

## Diving equipment - Diving open heel fins - Requirements and test methods

Équipement de plongée - Palmes de plongée non  
chaussantes - Exigences et méthodes d'essais

Tauch-Zubehör - Taucherflossen - Anforderungen und  
Prüfverfahren

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## European foreword

This document (EN 16804:2015) 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.

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## 1 Scope

This European Standard applies to open heel fins for diving where the user is breathing underwater. The purpose of this European Standard is the specification of minimum safety requirements.

## 2 Terms and definitions

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

### 2.1

#### **open heel fin**

fin that is retained on the user's foot by a heel band

Note 1 to entry: The term "fins" will be used in the current standard for open heel fins.

### 2.2

#### **heel band**

device allowing the diving fin to be maintained on the foot of the user

Note 1 to entry: The heel band might be adjustable.

### 2.3

#### **buckle**

device allowing adjustment of the heel band tension

## 3 Design requirements

### 3.1 General

The fin shall be designed to be maintained on the user's feet during normal condition of use.

Test in accordance with Clause 4.

### 3.2 Surfaces in contact with the foot

The fins shall not have any projecting parts, or corners and edges, which may injure the user.

Test in accordance with 4.1.

### 3.3 Heel band

Heel band shall be designed so that the fins can be donned and removed easily.

Test in accordance with 4.3.

If adjustable, when wetted, the heel band of a fin shall withstand a pull force of 150 N, during 10 s, without slipping.

Test in accordance with 4.2.1.

Any heel band shall withstand a pull force of 200 N, during 10 s, without detaching or slipping out from the buckle and/or attachment.

Test in accordance with 4.2.2.

The permanent linear deformation of the heel band shall not be greater than 5 % when tested at a pull force of 100 N for 10 s, measurement being carried out 30 min after pulling.

Test in accordance with 4.2.3.

## 4 Tests

### 4.1 Visual inspection

Visual inspection shall be conducted at normal visual acuity.

The visual inspection shall include tactual examination and the assessment of the device marking, information supplied by the manufacturer and any safety data sheet.

### 4.2 Heel band test

#### 4.2.1 Resistance to slipping

The fins shall be suspended on a support body having a radius of 20 mm by means of the heel band.

Each heel band adjustment shall be set to its midpoint.

A tensile force of 150 N is applied to the open-heel fin in the direction of the heel, for duration of 10 s.

#### 4.2.2 Resistance to slipping out or detachment

The fins shall be suspended on a support body having a radius of 20 mm by means of the heel band.

Each heel band adjustment shall be set to its midpoint.

A tensile force of 200 N is applied to the open-heel fin in the direction of the heel, for duration of 10 s.

#### 4.2.3 Permanent linear deformation

Test three samples: one end of the band is fixed; apply the force of 100 N to the free end of the heel strap for 10 s.

Measure the permanent linear deformation 30 min after the pull test.

### 4.3 Practical performance

During the test the fins will be subjectively assessed by three test subjects and their comments on the following points shall be recorded after the test:

- donning and doffing of the fins as well as adjustment of all straps (if applicable), without help on land;
- jumping into water (feet first) from the height of 1,5 m;
- swimming at a depth of at least 1 m for 15 m.

During jumping and swimming the fin shall not be damaged and shall not detach or become loose.

## 5 Marking

Each fin shall be marked according to the relevant following items:

- a) the manufacturer shall be identified by name, trade mark or other means of identification;
- b) size (if applicable);
- c) type-identifying mark;
- d) the number of this European standard.

## **6 Information supplied by the manufacturer**

The information supplied by the manufacturer shall be in the official language(s) of the country of destination and shall be attached to the fins or given in or on the packaging.

The information supplied by the manufacturer shall contain all information necessary for trained and qualified persons on instruction how to use and select the fins.





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