

Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms and definitions
4	Classification of personal flotation devices
5	Test methods
5.1	General
5.2	Sampling and conditioning
5.2.1	Sampling
5.2.2	Conditioning
5.3	Criteria
5.4	Magnetic properties testing
5.5	Mechanical properties tests
5.5.1	General
5.5.2	Rotating shock bin test
5.5.2.1	Principle
5.5.2.2	Apparatus
5.5.2.3	Procedure
5.5.2.4	Results
5.5.3	Temperature cycling test
5.5.3.1	Principle
5.5.3.2	Procedure
5.5.3.2.1	Inherently buoyant PFDs
5.5.3.2.2	Inflatable PFDs
5.5.3.3	Results
5.5.4	Horizontal and vertical load tests
5.5.4.1	Principle
5.5.4.2	Apparatus
5.5.4.3	Procedure
5.5.4.3.1	General
5.5.4.3.2	Horizontal load test
5.5.4.3.3	Vertical load test
5.5.4.4	Results
5.5.5	Lifting loop test
5.5.5.1	Principles
5.5.5.2	Apparatus
5.5.5.3	Procedure
5.5.5.4	Results
5.5.6	Buddy line test
5.5.6.1	Principle
5.5.6.2	Apparatus
5.5.6.3	Procedure
5.5.6.4	Results
5.5.7	Collar handles
5.5.7.1	Principle
5.5.7.2	Apparatus
5.5.7.3	Procedure
5.5.7.4	Results

- 5.5.8 Body strap hardware secureness test
 - 5.5.8.1 Principle
 - 5.5.8.2 Procedure
 - 5.5.8.3 Results
- 5.5.9 Inflation tests
 - 5.5.9.1 Principle
 - 5.5.9.2 Apparatus
 - 5.5.9.3 Procedure
 - 5.5.9.4 Results
- 5.5.10 Measurement of buoyancy of the whole device
 - 5.5.10.1 Principle
 - 5.5.10.2 Apparatus
 - 5.5.10.3 Procedure
 - 5.5.10.4 Results
- 5.5.11 Uninflated buoyancy test
 - 5.5.11.1 Principle
 - 5.5.11.2 Procedure
 - 5.5.11.3 Results
- 5.5.12 Buoyancy test for inherently buoyant material
 - 5.5.12.1 Principle
 - 5.5.12.2 Procedure
 - 5.5.12.3 Results
- 5.5.13 Test of the resistance to burning
 - 5.5.13.1 Principle
 - 5.5.13.2 Apparatus
 - 5.5.13.3 Procedure
 - 5.5.13.4 Results
- 5.5.14 Overpressure test
 - 5.5.14.1 Principle
 - 5.5.14.2 Apparatus
 - 5.5.14.3 Procedure
 - 5.5.14.4 Results
- 5.5.15 Strength test of attachment points
 - 5.5.15.1 Principles
 - 5.5.15.2 Apparatus
 - 5.5.15.3 Procedure
 - 5.5.15.4 Results
- 5.5.16 Test of the resistance to inadvertent inflation
 - 5.5.16.1 Principles
 - 5.5.16.2 Apparatus
 - 5.5.16.3 Procedure
 - 5.5.16.4 Results
- 5.6 Human subject performance tests
 - 5.6.1 General
 - 5.6.1.1 Test subjects
 - 5.6.1.2 Subject requirements for adults
 - 5.6.1.3 Subject requirements for infants and children
 - 5.6.1.4 In-water weight
 - 5.6.1.5 Dress
 - 5.6.1.6 Test sequence
 - 5.6.1.7 Ergonomics
 - 5.6.1.7.1 General
 - 5.6.1.7.2 Encumbrance assessment
 - 5.6.1.7.2.1 Principle
 - 5.6.1.7.2.2 Procedure
 - 5.6.1.7.2.3 Results
 - 5.6.1.8 Ride up assessment
 - 5.6.2 Donning test
 - 5.6.2.1 Principle
 - 5.6.2.2 Procedure
 - 5.6.2.3 Results
 - 5.6.3 Water entry test
 - 5.6.3.1 Principle
 - 5.6.3.2 Procedure

- 5.6.3.3 Results
- 5.6.4 Self-righting and stability test
- 5.6.4.1 Principle
- 5.6.4.2 Apparatus
- 5.6.4.3 Procedure
- 5.6.4.4 Results
- 5.6.5 Measurement of freeboard
- 5.6.5.1 Principle
- 5.6.5.2 Apparatus
- 5.6.5.3 Procedure
- 5.6.5.4 Results
- 5.6.6 In-water stability test for lifejackets
- 5.6.6.1 Principle
- 5.6.6.2 Procedure
- 5.6.6.3 Results
- 5.6.7 Boarding test
- 5.6.7.1 Principle
- 5.6.7.2 Apparatus
- 5.6.7.3 Procedure
- 5.6.7.4 Results
- 5.6.8 Oral inflation
- 5.6.8.1 Principle
- 5.6.8.2 Procedure
- 5.6.8.3 Results
- 5.7 Tests using manikins
- 5.7.1 General
- 5.7.2 Test order
- 5.7.2.1 General
- 5.7.2.2 Series 1:
- 5.7.2.3 Series 2:
- 5.7.2.4 Series 3:
- 5.7.3 Fall from a height
- 5.7.3.1 Principle
- 5.7.3.2 Procedure
- 5.7.4 Mouth freeboard
- 5.7.4.1 Principle
- 5.7.4.2 Procedure
- 5.7.5 Self-righting and stability
- 5.7.5.1 Principle
- 5.7.5.2 Procedure

Annex A (informative) Classification of personal flotation devices

- A.1 Classes
- A.1.1 Buoyancy aids
- A.1.2 Lifejackets
- A.1.3 Special application PFDs
- A.2 Performance levels
- A.2.1 Level 50
- A.2.2 Level 100
- A.2.3 Level 150
- A.2.4 Level 275

Annex B (normative) Adult reference vest for test subject disqualification

- B.1 General
- B.2 Description
- B.3 Materials
- B.3.1 General
- B.3.2 Foam requirements
- B.3.2.1 General
- B.3.2.2 Stiffness
- B.3.2.3 Shape
- B.3.2.4 Buoyancy
- B.3.3 Other component requirements
- B.4 Construction

Annex C (normative) Child reference vest for test subject disqualification and test subject group validation (body mass from 25 kg to 40 kg)

- C.1 General**
- C.2 Description**
- C.3 Materials**
 - C.3.1 General**
 - C.3.2 Foam requirements**
 - C.3.2.1 Stiffness and quality**
 - C.3.2.2 Shape**
 - C.3.2.3 Buoyancy**
 - C.3.3 Other component requirements**
- C.4 Construction**

Annex D (normative) Reference vest for test subject disqualification and test subject group validation (body mass less than 25 kg)

- D.1 General**
- D.2 Description**
- D.3 Materials**
 - D.3.1 General**
 - D.3.2 Foam requirements**
 - D.3.2.1 Stiffness and quality**
 - D.3.2.2 Shape**
 - D.3.2.3 Buoyancy**
 - D.3.3 Other component requirements**
- D.4 Construction**

Annex E (normative) Manikin

- E.1 General**
- E.2 Choice of manikin for testing**
- E.3 Required performance of manikins**
- E.4 Manikin design specification**
- E.5 Details of harness and swimsuit requirements**

Page count: 83