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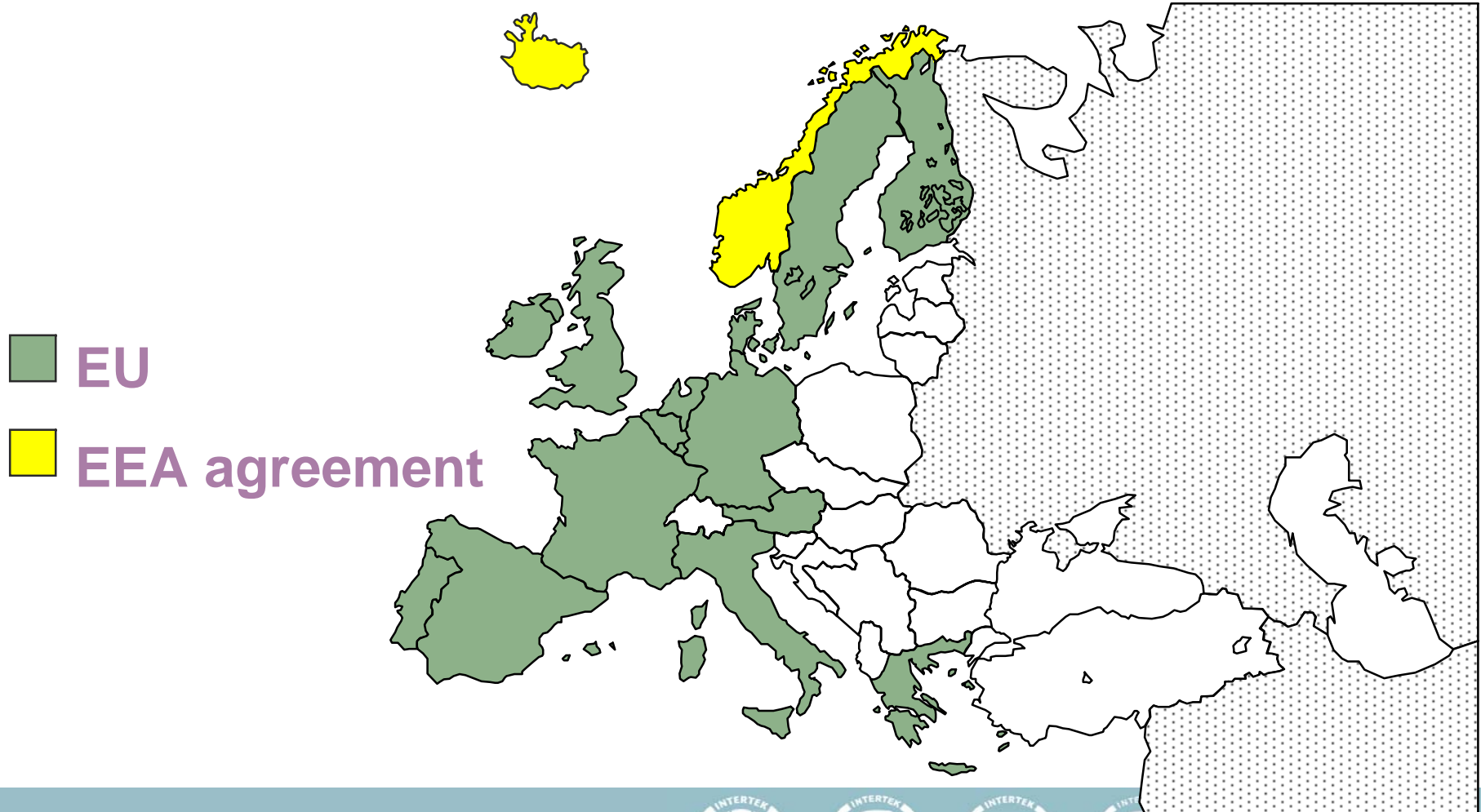
Testing everywhere for markets anywhere.

European Standards for Swimming pools in EU/EEA

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Europe



Member countries in the EU and the EEA

EU

Austria	Ireland
Belgium	Italy
Denmark	Luxembourg
Finland	Netherlands
France	Portugal
Germany	Spain
Great Britain	Sweden
Greece	

EEA

Iceland
Liechtenstein
Norway

EU directives

A directive is an agreement between the member states, which shall be implemented in the national legislation in the respective countries.

Products must fulfil the essential requirements of the relevant directive(s).

Compliance with the relevant European standard(s) gives presumption for compliance with the directive(s).

The Presumption Principle

A product is presumed to comply with the safety requirements if it complies with the standard.

1. Harmonised European standard published in the O.J.
2. CEE or IEC standard published in the O.J.

EU drowning related regulations and examples of best practice

Issue	Current situation in Europe	Examples of best practice not at the European level
Child care products	Bath seats prEN13822	
Pool and pond fencing	No European regulatory Requirements. Voluntary standards	Sweden and Austria have requirements
Personal flotation devices	EN 393:1993/Lifejacket	

EU drowning related regulations and examples of best practice

Issue	Current situation in Europe	Examples of best practice
Lighting Equipment	IEC/EN 60598	Electric shock LVD
Clearing Equipment Pumps and Heating	IEC/EN 60335-..	Electric shock LVD
Whirlpool spas	IEC/EN 60335-2-60 Date for voting 19 March 2004	Test 400 mm hair Suction openings (LVD)
Swimming pool equipment	EN 13451-1	

Swimming pool equipment

General specific safety - EN 13451

Part 1: General safety requirements and test methods

Part 2: Additional specific - ladders, and handle bends

Part 3: Additional specific – water treatment purposes

Part 4: Additional specific – starting platforms

Part 5: Additional specific – lane lines

Part 6: Additional specific – turning boards

Part 7 Additional specific – water polo goals

Part 8: Additional specific – leisure water features

Swimming pool equipment

General specific safety - EN 13451

Part 9: Safety signs

Part 10: Additional specific – Diving platforms, diving springboards and associated equipment

Part 11: Additional specific – moveable pool floors and moveable bulkheads

Swimming pool equipment

General specific safety - EN 13451-1

- 4.3 Protection against falling
- 4.4 Surfaces
- 4.8. Protection against entrapment
- 4.9 Suction
- 4.10 Slip resistance

General specific safety. EN 13451-1/

Protection against falling - Grasp 4.3.3

The thickness of any component designed to be grasped shall have a width not exceeding 60mm

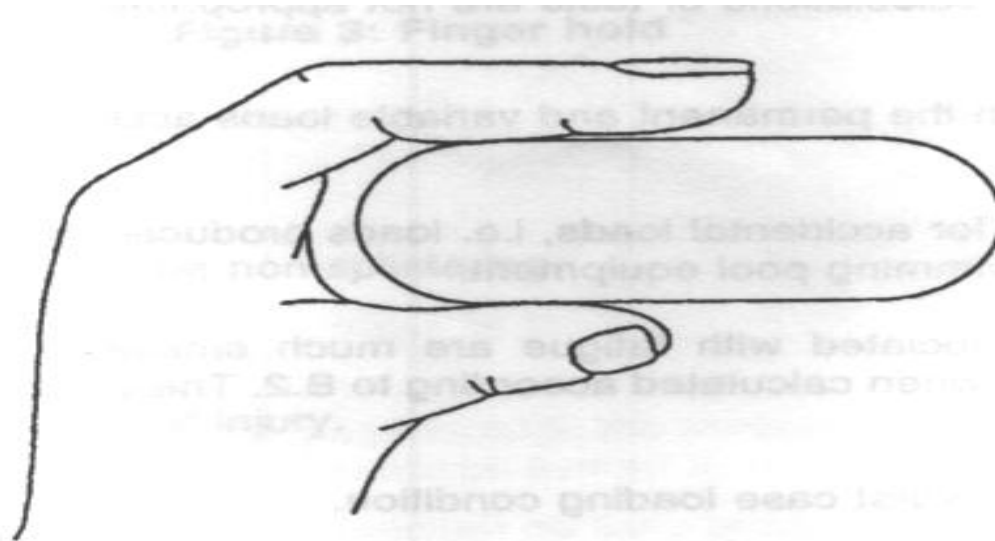


Figure 2: Grasp

Grip 4.3.2

Protection against falling The cross section of any component designed to be gripped shall be not less than 16 mm and not more than 50 mm

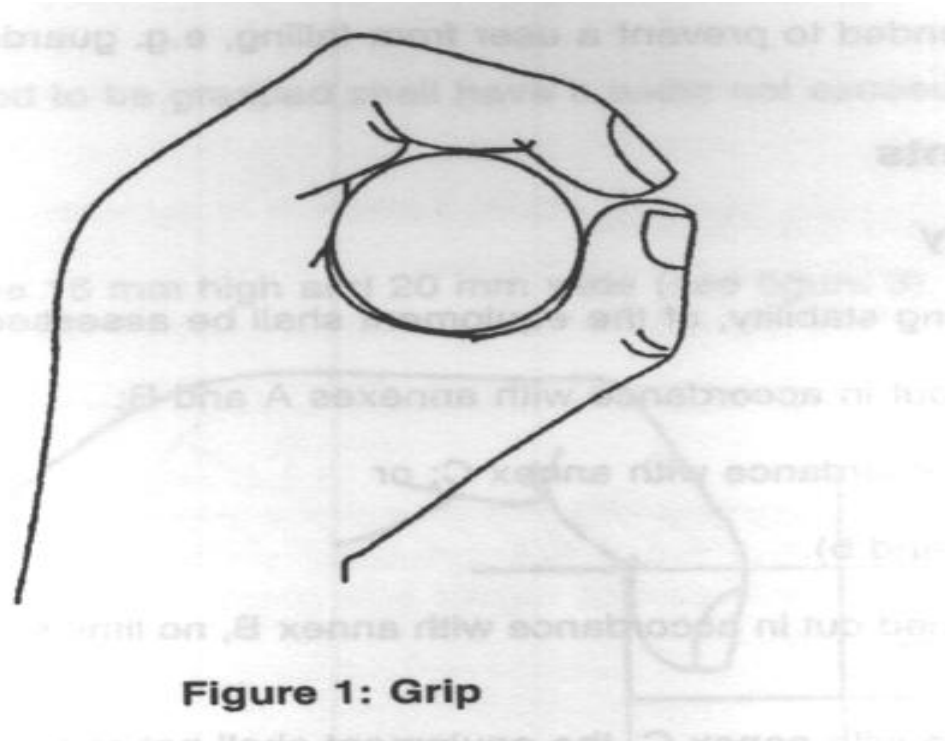


Figure 1: Grip

EN 13451-1

Protection against falling Surfaces 4.4

- **The surface finishing of equipment shall be non-splintering**
- **All welds shall be finished smooth**
- **Rough surfaces should not present any risk of injury**
- **The materials in contact with the water shall have no detrimental effects on their quality and shall be fit for their purposes**

EN 13451-1 Protection against entrapment

4.8.2 Entrapment of the head and neck

Equipment shall be constructed so that any openings do not create head and neck entrapment hazards either by head first or feet first passage.

- Completely bound openings
- Partially bound or V-shaped openings
- Shearing or moving openings

EN 13451-1

4.8.3 Entrapment of fingers

Equipment shall be constructed so that any opening does not create finger entrapment hazards. Special attention shall be paid to:

- Gaps
- Open-ended tubes or pipes
- Variable gaps

Swimming pool equipment

General specific safety. EN 13451-1

4.9 Suction

Suction from the swimming pool shall be avoided, unless the water speed in the proximity of the suction point is under all conditions $\leq 0,5\text{m/s}$. Additionally at least one of the following requirements shall be met:

Swimming pool equipment

General specific safety - EN 13451-1

4.9 Suction

- a) A number of extraction points connected in parallel to each suction line and placed at a distance $> 2\text{m}$
- b) Domed grids with perimetral suction
- c) A gravity feed tank;
- d) Single grid of a minimum area of 1m^2

Summary: EU directives concerning electrical products in swimming pool

Pumps, Lighting, Cleaning Equipment,
Whirlpool baths and Whirlpool spas

Low
voltage
(LVD)
73/28/EEC

EMC

89/336/EEC

Summary:

Requirements for admission to the market

Technical file / Test reports

Declaration of conformity

CE marking

Internal production control (LVD)

Summary:

European standard for swimming pool EN 13451-1

This standard specifies general safety requirements and test methods for swimming pools