

# DIN EN 812:2012-04 (E)

## Industrial bump caps

---

<b>Contents</b>		<b>Page</b>
Foreword .....		4
<b>1</b>	<b>Scope .....</b>	<b>5</b>
<b>2</b>	<b>Normative references .....</b>	<b>5</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>5</b>
<b>4</b>	<b>Physical requirements .....</b>	<b>7</b>
4.1	Materials and construction .....	7
4.2	Cradle .....	7
4.3	Comfort band or sweatband .....	7
4.4	Retention .....	7
4.5	Headband/nape strap .....	7
4.6	Chin strap .....	8
4.7	Ventilation .....	8
4.8	Accessories .....	8
<b>5</b>	<b>Performance requirements .....</b>	<b>8</b>
5.1	Mandatory requirements .....	8
5.1.1	Impact protection .....	8
5.1.2	Resistance to penetration .....	8
5.1.3	Chin strap anchorages .....	8
5.2	Optional requirements .....	8
5.2.1	Very low temperature (-20 °C or -30 °C) .....	8
5.2.2	Resistance to flame .....	9
5.2.3	Electrical properties .....	9
<b>6</b>	<b>Test requirements .....</b>	<b>9</b>
6.1	Samples .....	9
6.2	Conditioning for testing .....	10
6.2.1	Temperature conditioning cabinet .....	10
6.2.2	Low temperature .....	10
6.2.3	High temperature .....	10
6.2.4	Water immersion .....	10
6.2.5	Artificial ageing .....	10
6.2.6	Very low temperature .....	11
6.3	Testing atmosphere .....	11
6.4	Headforms .....	11
6.4.1	Construction .....	11
6.4.2	Selection of size .....	11
6.5	Impact protection .....	11
6.5.1	Principle .....	11
6.5.2	Apparatus .....	11
6.5.3	Procedure .....	12
6.6	Resistance to penetration .....	12
6.6.1	Principle .....	12
6.6.2	Apparatus .....	12
6.6.3	Procedure .....	13
6.7	Chin strap anchorages .....	13
6.7.1	Principle .....	13
6.7.2	Apparatus .....	13

6.7.3	Procedure .....	13
6.8	Resistance to flame .....	14
6.8.1	Principle .....	14
6.8.2	Apparatus .....	14
6.8.3	Test procedure .....	14
6.9	Electrical properties .....	14
6.9.1	Test 1 .....	14
6.9.2	Test 2 .....	15
6.9.3	Test 3 .....	15
7	Marking and information .....	15
7.1	Markings on the bump cap .....	15
7.2	Additional information to be supplied by the manufacturer .....	16
Annex A (informative) Recommendations for materials and construction .....		18
Annex B (informative) Alternative method for artificial ageing .....		19
Annex C (informative) Significant technical changes between this European Standard and Annex ZA (normative) Relationship between this European Standard and the Essential Requirements of EU Directive 89/686/EEC Personal Protective Equipment .....		21
Bibliography .....		22