

DIN EN 397:2026-07 (E)

Industrial protective helmets (includes Corrigendum :2025)

Contents		Page
European foreword		4
Introduction		5
1	Scope	6
2	Normative references	6
3	Terms and definitions	7
4	Requirements	9
4.1	Physical requirements	9
4.1.1	Requirements overview	9
4.1.2	General	10
4.1.3	Material and design	10
4.1.4	Penetration of the shell via ventilation holes	10
4.1.5	Sizing	10
4.1.6	Ergonomics	11
4.2	Performance requirements	11
4.2.1	Shock absorption on-crown impacts for type 1 and 2	11
4.2.2	Shock absorption for high energy on-crown impact for type 2	11
4.2.3	Shock absorption for off-crown impacts for type 2	11
4.2.4	Resistance to penetration	11
4.2.5	Retention system	11
4.2.6	Resistance to ignition	12
4.2.7	Special application requirements	12
4.2.8	Marking	18
5	Test methods	18
5.1	Samples	18
5.2	Conditioning for testing	24
5.2.1	General	24
5.2.2	Ambient temperature	24
5.2.3	Low temperature	24
5.2.4	High temperature	24
5.2.5	Water immersion	24
5.2.6	Artificial ageing	24
5.2.7	Higher temperature	24
5.2.8	Artificial ageing for enhanced visibility	26
5.3	Headforms	26
5.3.1	Construction	26
5.3.2	Selection of size	26
5.4	Pin insertion of the shell via ventilation holes	26
5.5	Sizing	27
5.6	Ergonomics	27
5.6.1	General	27
5.6.2	Test subjects	27
5.6.3	Procedure	27
5.7	Shock absorption	28
5.7.1	Shock absorption for crown impact for type 1 and type 2	28
5.7.2	Shock absorption for high energy on-crown impact for type 2	29
5.7.3	Shock absorption for off-crown for type 2	29

5.8	Resistance to penetration	31
5.9	Retention system strength release	31
5.10	Retention system effectiveness	31
5.10.1	General	31
5.10.2	Principle	32
5.10.3	Apparatus	32
5.11	Resistance to ignition of the shell	34
5.11.1	Principle	34
5.11.2	Apparatus	34
5.11.3	Procedure	34
5.11.4	Report	34
5.12	Molten metal splash	34
5.12.1	Principle	34
5.12.2	Apparatus	35
5.12.3	Procedure	35
5.13	Electrostatic properties	35
5.13.1	Atmosphere for conditioning and testing	35
5.13.2	Surface resistance test for helmets comprising dissipative or conductive components ...	35
5.13.3	Leakage resistance test for helmets comprising dissipative or conductive components ..	35
5.13.4	Capacitance test for isolated conductive helmet components	36
5.13.5	Transferred charge test for insulating and isolated dissipative helmet components	37
5.14	Enhanced visibility	39
5.14.1	Background material	39
5.14.2	Surface of retroreflective material	39
5.14.3	Coefficient of retroreflection	39
5.15	Determination of resistance to off-crown penetration	39
5.15.1	Apparatus	39
5.15.2	Procedure	40
6	Marking	40
6.1	General	40
6.2	General markings	40
7	Manufacturer's instructions and information	41
7.1	General	41
7.2	For electrostatic properties	42
7.3	For enhanced visibility properties	43
Annex A (normative) Flowchart for testing electrostatic properties		44
Annex ZA (informative) Relationship between this European Standard and the essential Requirements of Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment aimed to be covered		53
Bibliography		55