



OnSite Support Research Team

NEW EN 397:2025

Industrial

Protective Helmet

Standard

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ACCORDING TO HSE STATISTICS, HEAD INJURIES ARE A SIGNIFICANT CONCERN, ESPECIALLY IN INDUSTRIES LIKE CONSTRUCTION

IN 2020/21, THE CONSTRUCTION INDUSTRY SAW 61,000 NON-FATAL INJURIES, AND BEING STRUCK BY FALLING OBJECTS ACCOUNTED FOR A SUBSTANTIAL PORTION OF WORKPLACE FATALITIES (17 DEATHS) IN THE SAME YEAR.

Introduction

Our brains support functions as the body's command centre, controlling both conscious and unconscious actions. It is responsible for higher-level functions like thinking, memory, and emotions, as well as automatic processes such as breathing, heart rate, and digestion.

The main function of the skull is to protect the brain from injury. It also provides structural support for the face, attaches muscles for facial expression and protects structures like the eyes and nerves.

The Importance of Head Protection

Head protection accounts for only 3% of PPE purchases, yet account for over 20% of injuries. On average people spend £25-£30 on a pair of safety boots, but only £5-£8 on their safety helmet.

Hazards to the head and neck include falling or flying objects, risk of banging the head, hair getting tangled in machinery, chemical drips or splash, climate or extreme temperatures.

The Health and Safety Executive (HSE) guidance on head protection mandates that employers provide suitable head protection where there is a risk of head injury, such as on most construction sites. This includes ensuring helmets are in good condition, fit properly, are worn correctly, and do not prevent the use of other essential PPE like hearing protectors. Helmets must be suitable for the specific task (e.g., a "height-safe" helmet for working at height).

BS EN 397:2025



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This is a newly revised standard over the outgoing BS EN 397:2012+A1:2012

Why the change?

The 2025 standard aligns more closely with modern expectations for both safety and versatility in demanding environments with

- more specific requirements,
- a more detailed classification system
- enhanced performance features for modern industrial environments

The Regulations

Overall Regulation

PPE regulations require employers to provide suitable PPE, ensure it's maintained and correctly stored, and provide workers with adequate information, instruction, and training on its use.

Employees have a duty to use the PPE correctly and ensure it is stored and maintained correctly after use.

In Great Britain, these rules are covered by the Personal Protective Equipment at Work (Amendment) Regulations 2022, which updated the 1992 regulations.

What has changed?

The EN 397:2025 standard brings key changes to performance, design and compatibility, plus several all-new requirements.

In essence, BS EN 397:2025 builds upon the foundation of BS EN 397:2012 by introducing more specific requirements, a more detailed classification system, and enhanced performance features for modern industrial environments.

Key Aspects to the Changes

Key changes include the introduction of two helmet types (Type 1 and Type 2) to differentiate between

- top-impact and top/side/rear impact protection
- enhanced compatibility testing with other PPE like visors and ear defenders
- added requirements for visibility and electrostatic properties

KEY CHANGES	
EN 397:2012	EN 397:2025
Single performance level	Type 1 for on-crown impacts* Type 2 for on- and off-crown impacts**
Chinstrap release 150–250 N	Type 1 release force: Over 150 N Type 2 release force: Over 500 N
440V electrical insulation option	Electrical requirements now under EN 50365:2023
Accessories listed in user instructions with no specific test requirements	Additions and accessories tested and assessed for helmet compatibility
Test requirements specify drop height	Test requirements specify velocity
Flammability testing	Ignition testing
NEW REQUIREMENTS	
<ul style="list-style-type: none"> • Ergonomics assessment (mandatory) • Off-crown penetration resistance (optional) 	<ul style="list-style-type: none"> • Enhanced visibility – day / night time (optional) • Electrostatic dissipative properties (optional)
OPTIONS REMOVED	
<ul style="list-style-type: none"> • Lateral deformation 	

* Mandatory Type 1 impact tests: On-crown shock absorption, on-crown penetration resistance
 ** Mandatory Type 2 impact tests: On- and off-crown shock absorption, on-crown penetration resistance

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Scope:

Applies to helmets for general use in industry.

Type 1 These types of helmets are designed for protection against vertical impacts (one-direction) throughout the crown (on-crown), such as falling objects.

Type 2 Helmets with this type of classification have more protection against multiple directions (off-crown), such as side impacts.

TYPE 1		TYPE 2		
On-crown		On-crown		Off-crown
Shock absorption 5kg at 4.43m/s 49 Joules	Penetration resistance 3kg at 1m 29 Joules	Shock absorption 5kg at 2m 98 Joules	Penetration resistance 3kg at 1m 29 Joules	Shock absorption 5kg at 0.5m 24.5 Joules

Options applicable to industrial applications: off-crown penetration, molten metal splash, higher/lower temperatures, electrical insulation.
NEW EN 50365:2023 standard includes 4 electrical insulation performance classes up to 17kV.

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How is testing done?

- **Improved Drop Speed Measurement:**
Defines measurement of drop speed for improved reproducibility.
- **Electrostatic and Visibility Requirements:**
Added requirements for electrostatic discharge and enhanced visibility.

EN 397:2025 Performance requirements			
MANDATORY REQUIREMENTS		OPTIONAL 'SPECIAL APPLICATION' REQUIREMENTS	
Type 1	Type 2		
Shock absorption – on-crown (*)	Shock absorption – on-crown (*)	-20°C / -30°C / -40°C	Lower temperature (*)
	Shock absorption – high energy on-crown (NEW)	150°C	Higher temperature (*)
	Shock absorption – off-crown (NEW)		Electrical insulation (*)
Penetration resistance – on-crown (=)	Penetration resistance – on-crown (=)	MM	Molten metal splash (=)
Chin strap strength release (*)	Chin strap strength release (*)		Electrostatic dissipative properties (NEW)
	Retention system effectiveness (NEW)		Enhanced visibility (NEW)
Resistance to ignition (*)	Resistance to ignition (*)	OCP	Penetration resistance – off-crown (NEW)

Key: (NEW) a new requirement (=) the same as :2012 version (*) an existing requirement that's changed

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Other Aspects to Consider

Hierarchy of controls

PPE should be regarded as the last resort to protect against risks to health and safety. Engineering controls and safe systems of work should be considered first.

Consider controls in the following order, with elimination being the most effective and PPE being the least effective:

- Elimination – physically remove the hazard
- Substitution – replace the hazard
- Engineering controls – isolate people from the hazard
- Administrative controls – change the way people work
- PPE – protect the worker with personal protective equipment

Key HSE requirements for head protection

- Risk assessment: Conduct a risk assessment to identify hazards and determine the need for head protection.
- Provision: Employers must provide suitable head protection for all workers and visitors where a risk exists.
- Condition: Helmets must be in good condition and replaced if damaged, or if they have been subjected to a significant impact.
- Fit and wear: The head protection must fit the person and be worn correctly at all times when there is a risk.
- Compatibility: It must allow for the wearing of other necessary PPE, such as ear defenders.
- Supplier: Head protection must be obtained from a reputable supplier.

Types of head protection

- Industrial safety helmets (hard hats): Protect against falling materials and impact with stationary objects.
- Industrial scalp protectors (bump caps): Protect against minor bumps and knocking against stationary objects, but are not suitable for impact from falling objects.
- Specialist helmets: Available for specific risks like high temperatures, electrical shock (e.g., Class E helmets), or molten metal splash.

Compatibility

- Non-integral elements: Visor, ear defenders, etc
- Helmet accessories: Lamp, camera, etc

Maintenance and replacement

- Inspection: Check the helmet daily for cracks or other damage. Check the suspension system for wear.
- Cleaning: Clean with mild soap and water. Do not use harsh chemicals.
- Replacement: Replace helmets after a significant impact, or on a regular schedule recommended by the manufacturer (often every 2-5 years).
- Modifications: Do not alter or modify the helmet, as this can reduce its protective capabilities.

Conclusion

The new standard EN 397:2025 marks a monumental shift in safety helmet regulations, introducing two distinct helmet types: Type 1 for top impacts and Type 2 for top, side, and rear impacts.

New compatibility tests are set to improve how helmets work with accessories and other PPE, like visors and ear defenders, bringing the standard in line with global safety rules.

New standards can only help but make a significant difference. However whilst there is widespread awareness of the need to wear a hard hat on modern day construction sites, surveys show there is still a cavalier attitude to head injuries.

This is despite growing evidence of the short- and long-term damage that can be inflicted by even a single knock to the head and brain injuries being far more common than many people think.

What happens next?

There is no rush to update your helmet to the new standard – EN 397:2012 helmets can continue to be used and sold until the CE/UKCA certificate expires.

Acknowledgements

BSI Knowledge <https://knowledge.bsigroup.com/products/industrial-protective-helmets-2>

JSP Safety [Introducing the new EN 397:2025 Industrial Protective Helmet standard](#)

[Webinar: EN 397 - New Industrial Head Protection Standard](#)

[NEW EN 397:2025 Industrial Protective Helmet Standard](#)

Headway [Workplace hard hat safety survey results](#)

WHY WEARING THE RIGHT HELMET IS ESSENTIAL:

52% of workers surveyed said they had experienced a head injury which they did not report to their manager with only 6% of responses of those injured seeking medical attention.

