



BSI Standards Publication

**Fire and rescue service equipment
– Ultra-high pressure firefighting
equipment – Specification**

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Summary of pages

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Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 August 2019. It was prepared by Technical Committee FSH/017, *Fire & Rescue Service Equipment*. A list of organizations represented on this committee can be obtained on request to its secretary.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Requirements in this standard are drafted in accordance with *Rules for the structure and drafting of UK standards*, subclause **G.1.1**, which states, “Requirements should be expressed using wording such as: ‘When tested as described in Annex A, the product shall ...’”. This means that only those products that are capable of passing the specified test will be deemed to conform to this standard.

Where words have alternative spellings, the preferred spelling of the Shorter Oxford English Dictionary is used (e.g. “organization” rather than “organisation”).

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

0 Introduction

Ultra-high pressure firefighting equipment (UHPFE) has demonstrated value in assisting with the safety of firefighters at operational incidents.

Correctly designed, installed and maintained UHPFE can allow the rapid and safe application of water mist from outside a fire compartment in one continuous action. Operation of the system rapidly reduces the temperature inside a fire compartment as well as the rate of production of heat and smoke, allowing firefighters to enter a compartment under more permissible conditions.

This British Standard accordingly covers design, maintenance and testing of UHPFE for use by trained and competent personnel.

The use of components that have been tested and conform to relevant component specifications for firefighting operations is also important for system performance and reliability. The testing and approval of system components for UHPFE is a developing area and in some instances it might be appropriate to select components that have been approved for use in commercial ultra-high pressure water systems.

The provision of UHPFE does not negate the need for other firefighting equipment.

1 Scope

This British Standard specifies requirements for ultra-high pressure firefighting equipment (100 bar to 350 bar), designed to pierce a hole using ultra-high pressure water and abrasive to deliver water mist for firefighting purposes in one continuous action.

This British Standard is relevant to manufacturers and operators of ultra-high pressure firefighting equipment.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes provisions of this document¹. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS EN 1829-1:2010, *High pressure water jet machines — Safety requirements — Part 1: Machines*

BS EN 1846 (all parts), *Firefighting and rescue service vehicles*

BS EN 12162, *Liquid pumps — Safety requirements — Procedure for hydrostatic testing*

BS EN 60204-1, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements*

BS EN 60529:1992+A2:2013, *Degrees of protection provided by enclosures*

BS EN 61310-2, *Safety of machinery — Indication, marking and actuation — Part 2: Requirements for marking*

BS EN ISO 7010, *Graphical symbols — Safety colours and safety signs — Registered safety signs*

BS EN ISO 12100, *Safety of machinery — General principles for design — Risk assessment and risk reduction*

¹ Documents that are referred to solely in an informative manner are listed in the Bibliography.