BS EN 14404-3:2024

BSI Standards Publication

Personal protective equipment — Knee protectors for work in the kneeling position

Part 3: Requirements for the individual combination of knee pads and garments (type 2)

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National foreword

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English Version

Personal protective equipment - Knee protectors for work in the kneeling position - Part 3: Requirements for the individual combination of knee pads and garments (type 2)

Équipements de protection individuelle - Protecteurs de genoux pour le travail à genoux - Partie 3 : Exigences relatives à la combinaison de plaques de genouillères et de vêtements (type 2)

Persönliche Schutzausrüstung - Knieschutz für Arbeiten in kniender Haltung - Teil 3: Anforderungen an die Kombination von Kniepolstern und Bekleidung (Typ 2)

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European foreword

This document (EN 14404-3:2024) has been prepared by Technical Committee CEN/TC 162 “Protective clothing including hand and arm protection and life jackets”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2024 and conflicting national standards shall be withdrawn at the latest by November 2024.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document, together with EN 14404-1, EN 14404-2 and EN 14404-4 to EN 14404-6, will supersede EN 14404:2004+A1:2010.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

EN 14404 “*Personal protective equipment — Knee protectors for work in the kneeling position*” is split into 6 parts:

— *Part 1: Test methods;*

— *Part 2: Requirements for wearable knee protectors (type 1);*

— *Part 3: Requirements for the individual combination) of knee pads and garments (type 2);*

— *Part 4: Requirements for the combination of interoperable knee pads and garments (type 2);*

— *Part 5: Requirements for knee mats (type 3);*

— *Part 6: Requirements for kneeling systems (type 4).*

With the splitting of the standard, the following changes were made:

— definition of the protection zone;

— new combination of interoperable knee pads with interoperable garments (EN 14404-4);

— a bend test for interoperable knee pad was introduced;

— normative references were updated, further normative references are included;

— the cleaning of garments was taken into account;

— an uneven test surface and test was introduced;

— no more "UNISIZE" size; adjustment of size designation;

— additional markings were added.

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Introduction

Kneeling is a frequently occurring working position, but one which is problematic from an occupational health viewpoint. Without knee protectors, workers can suffer immediate injuries from hard surfaces and small stones and similar objects lying on the surfaces. However, no knee protector can ensure that workers will not suffer medical complications if they are required to kneel for long periods.

It is important that knee protectors do not compromise venous drainage in the leg while kneeling or standing up. Therefore, it is important that it is easy for workers to change position and to stand up to re-establish a normal blood circulation at frequent intervals while wearing knee protectors.

Work in a kneeling position involves the risk of chronic diseases such as prepatellar bursitis and cartilage injuries caused by continuous pressure on the knees. Knee protection is therefore recommended for all work in the kneeling position. The protection should distribute forces evenly and prevent small hard objects on the ground causing injuries. Many workers have pre-existing damage to their knees, particularly to their cartilage from sports injuries and from previous work. These injuries will be made worse by further kneeling. Wearing knee protectors cannot correct existing damage but should slow down further damaging effects.

Work in a kneeling position can expose the skin of the shins, knees and thighs to toxic and corrosive materials normally kept off the body while walking and standing by waterproof or water-resistant footwear. Knee protectors and trousers for use with such wet materials and particularly wet cement, should take this into account and provide adequate protection.

For working in a kneeling position, four types of knee protectors exist:

— wearable knee protectors (type 1),

— knee pads in combination with garments (type 2),

— knee mats (type 3), and

— kneeling systems (type 4).

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