PRODUCT	STANDARD	COMMENT
Surgical drapes and gowns Medical Textiles	**EN 13795** **Surgical drapes, gowns and clean air suits, used as medical devices for patients, clinical staff and equipment - General requirements for manufacturers, processors and products, test methods, performance requirements and performance levels**	The scope contains single use and reusable drapes and gowns. As a medical device, textiles used in operating rooms have to be conform to the requirements of the European Medical Devices Directive 2007/47/EC (modified 93/42/EEC). The standard EN 13795 defines the requirements and corresponding test methods. ○ Resistance to microbial penetration-Wet ○ Resistance to liquid penetration in reference to achieve a reasonable physiological comfort.
Awnings Technical Textiles Strong dynamic water-repellence	**1. Standards that are directly related to the use of FC** **EN 20811** **Textiles. Determination of resistance to water penetration. Hydrostatic pressure test** **DIN EN ISO 4920** **Textile fabrics -- Determination of resistance to surface wetting (spray test)** **AATCC 22 Water Repellency: Spray Test** **DIN EN 29 865** **Textiles; determination of water-repellency of fabrics by the Bundesmann rain-shower test** **DIN EN ISO105-B04** **Textiles - Tests for colour fastness - Part B04: Colour fastness to artificial weathering: Xenon arc fading lamp**	

Awnings Technical Textiles Strong dynamic water-repellence	**test** **2. Other Standards that are indirectly related to the use of FC** **DIN 53931** **Testing Of Textiles; Determination Of The Resistance Of Textiles To Mildew; Growth Test** **DIN EN ISO 12947 (1-4)** **Textiles - Determination of the abrasion resistance of fabrics by the Martindale method** **ASTM D4032** **Test Method for stiffness of fabric by circular bend procedure**	
Hand and arm protection **(penetration and permeation)**	**DIN EN 420:2010-03** **Protective gloves - General requirements and test methods** This standard specifies the requirements applicable to all protective gloves relevant test methods and the general requirements such as resistance of the glove material against water penetration. It shall be used in conjunction with specific product standards. The standard deals with particular aspects of quality, health and safety. The standard is used in conjunction with specific product standards as a basis for the placing on the market of protective gloves under the Directive 89/686 / EEC for personal protective equipment. The use of protective gloves is not limited to individual sectors, but affects many areas of life and work in different branches. **EN 388:2003** **Protective gloves against mechanical risks** Protective gloves against mechanical risks. The standard is to apply in combination with DIN EN 420:2003-12. **EN 374:2003** **Protective gloves against chemicals and micro-organisms. Terminology and performance requirements** This European Standard specifies the requirements for gloves to protect the user against chemicals and/or micro-organisms and defines terms to be used.	

EN 407:2004
Protective gloves against thermal risks (heat and/or fire)
This standard specifies thermal performance for protective gloves against heat and/or fire:
•a. Resistance to flammability (performance level 0 - 4)
•b. Contact heat resistance (performance level 0 - 4)
•c. Convective heat resistance (performance level 0 - 4)
•d. Radiant heat resistance (performance level 0 - 4)
•e. Resistance to small splashes of molten metal (performance level 0 - 4)
•f. Resistance to large splashes of molten metal (performance level 0 - 4)

EN 511:2006
Protective gloves against cold
This standard applies to any gloves to protect the hands against convective and contact cold down to -50 °C.

a. Resistance to convective cold (performance level 0 - 4)
Based on the thermal insulation properties of the glove which are obtained by measuring the transfer of cold via convection.
b. Resistance to contact cold (performance level 0 - 4)
Based on the thermal resistance of the glove material when exposed to contact with a cold object.
c. Penetration by water (0 or 1)
0 = water penetration
1 = no water penetration.

EN 421:2010
Gloves giving protection from radioactive contamination and ionising radiation
This standard applies to gloves to protect from ionising radiation and radioactive contamination. To protect from radioactive contamination it is important that, the glove has to be liquid proof and it needs to pass penetration test EN 374.

Other Gloves with special requirements

DIN EN 659 Protective gloves for firefighters

EN 12477
Gloves giving protection from manual metal welding
This standard applies to protective gloves for use in manual metal welding, cutting and allied processes. Requirements such as burning behavior, Contact heat and Convective heat, small splashes …

Gloves for Electricians:
- **EN 50237**

Gloves and mitts with mechanical protection for electrical purposes
This standard applies to insulating gloves and mitts made of plastic

	or elastomer for use without over-gloves for mechanical protection. Gloves for working at nominal voltages up to 7500 V. - **EN 60903:2004 Live working - Gloves of insulating material** - **EN 60984 Specification for sleeves of insulating material for live working**
Protective Clothing Chemical protective clothing	**EN 340** **Protective clothing. General requirements** The European Standard specifies: Protective clothing, Clothing, Performance, Grades (quality), Ergonomics, Anthropometric characteristics, Fitness for purpose, Classification systems, Clothing sizes, Ageing (materials), Compatibility, Marking, Instructions for use **EN 943** **Protective clothing against liquid and gaseous chemicals**, including liquid aerosols and solid particles - Part 1: Performance requirements for ventilated and non-ventilated 'gas-tight' (Type 1) and 'non-gas-tight' (Type 2) chemical protective suits Part 2: Protective clothing against liquid and gaseous chemicals, including liquid aerosols and solid particles - Part 2: Performance requirements for “gas-tight” (Type 1) chemical protective suits for emergency teams (ET) **EN14605** **Protective clothing against liquid chemicals** - Performance requirements for clothing with liquid-tight (Type 3) or spray-tight (Type 4) connections, including items providing protection to parts of the body only (Types PB [3] and PB [4]) **EN 13982** **Protective clothing for use against solid particulates** - Part 1: Performance requirements for chemical protective clothing providing protection to the full body against airborne solid particulates (type 5 clothing) **EN 13034** **Protective clothing against liquid chemicals** — Performance requirements for chemical protective suits offering limited protective performance against liquid chemicals (Type 6 equipment)

Clothing to protect against heat and flame	**EN ISO 11612** **Protective clothing - Clothing to protect against heat and flame** - Minimum performance requirements A: Minimum protective performance with respect to flame spread (test method EN ISO 15052) B: Performance with respect to insulation against convective heat (test method EN ISO 9151) C: Performance with respect to insulation against heat radiated (test method EN ISO 6942) D: Performance with respect to insulation against aluminum spraying (test method EN ISO 9185) E: Performance with respect to insulation against cast iron spraying (test method EN ISO 9185) F: Performance with respect to insulation against heat through contact (test method EN ISO 12127)
Protective Clothing for use in welding	**EN ISO 11611** **Protective clothing for use in welding and allied processes** This standard specifies minimum basic safety requirements and test methods for protective clothing including hoods (head), aprons, sleeves and gaiters (feet). This PPE protects against spatter, short contact time with flame, radiant heat from the arc, and minimizes the possibility of electrical shock by short-term, accidental contact with electrical conductors in normal conditions of welding. Test methods: EN ISO 15025, EN ISO 6942, EN ISO 9150
Protective clothing - Protection against rain	**EN ISO 343** **Protective clothing - Protection against rain** It specifies the requirements and test methods for materials and the seams of clothing designed to give protection against precipitation (rain, snow), mist and ground moisture. The separate testing method for assessing the rainproofing of garments is EN 14360. Value X stands for the waterproofing of the article. There are 3 classes: - 3 is the highest (i.e. the most waterproof) and 1 is the lowest. A specific quantity of pressurised water is applied to the fabric (in combination with the insert); the respective class is derived from the amount of pressure the fabric can withstand. Value Y stands for the breathability of the fabrics (plus all the layers used in the article). There are 3 classes for breathability. Class 1 = the lowest and Class 3 = the highest.
Protective clothing for protection against cool environments	**EN 14058** **Protective clothing - Garments for protection against cool environments** Articles are divided in three classes depending on their thermal resistance (insulation). With the test method two optional features can be tested: the

Other Protective clothing	water vapour resistance and thermal insulation. Clothing certified with this standard includes: ○ Thermal resistance ○ Air permeability ○ Penetration of water ○ Water vapour resistance ○ Thermal insulation **EN 342** **Protective clothing - Ensembles and garments for protection against cold** **EN 1073** **Protective clothing against radioactive contamination** Requirements and test methods for ventilated protective clothing against particulate radioactive contamination. This standard is for requirements and test methods for ventilated protective clothing against particulate radioactive contamination. Protective clothing, Radiation protection, Radioactive materials, Contamination, Clothing, Particulate air pollutants, Industrial overalls, Protective suits, Performance testing, Splitting tests, Leak tests, Gas-resistance tests, Watertightness tests, Dust-tightness tests, Perforating tests, Tear tests, Chemical-resistance tests, Abrasion-resistant materials, Protective coatings, Breathing apparatus, Visors, Air, Gas flow, Flow measurement, Seams, Design, Occupational safety, Performance, Wear resistance, Strength of materials, Classification systems, Marking, Instructions for use, Testing conditions **EN 50286** **Electrical insulating protective clothing for work on low-voltage installations** **EN 61482** **Live working - Protective clothing against the thermal hazards of an electric arc** - Test methods - Method 1: Determination of the arc rating of flame resistant materials for clothing **EN 1149-5** **Protective clothing** - Electrostatic properties - Part 5: Material performance and design requirements This European Standard specifies material and design requirements for electrostatic dissipative clothing, used as part of a total earthed system, to avoid incendiary discharges. These anti-static clothing are compliant and designed for use in an ATEX (EXplosive ATmosphere) working environment where a risk of explosion is possible, e.g. tank truck driver.
Protective clothing for firefighters	**EN 469** **Protective clothing for firefighters** PPE worn during structural firefighting to protect mainly against heat and flame.

	Requirements: •Flame spread (test method ISO 15025) •Convective heat (test method EN 367) •Radiant heat (test method ISO 6942) •Heat resistance (test method ISO 17493) •Water repellence, dimensional stability, resistance to chemicals