

ISO/TR 23383:2020 (E)

Textiles and textile products — Smart (Intelligent) textiles— Definitions, categorisation, applications and standardization needs

Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms and definitions
4	Functional and smart textile products
4.1	Functional textile products
4.1.1	General
4.1.2	Electrically conductive textile products
4.1.3	Thermally conductive textile products
4.1.4	Thermally radiative (emissive) textile products
4.1.5	Optically conductive textile products
4.1.6	Fluorescent textile products
4.1.7	Phosphorescent textile products
4.1.8	Textile products releasing substances
4.2	Smart (intelligent) textile products
4.2.1	General
4.2.2	Chromic textile products
4.2.3	Phase change textile products
4.2.4	Textile products with active ingredients inside the microcapsules
4.2.5	Shape change (shape memory) textile products
4.2.6	Super-absorbing polymers and gels
4.2.7	Auxetic textile products
4.2.8	Dilating and shear-thickening textile products
4.2.9	Piezoelectric textile products
4.2.10	Electroluminescent textile products
4.2.11	Thermo-electric textile products
4.2.12	Photovoltaic textile products
4.2.13	Electrolytic textile products
4.2.14	Capacitive textile products
5	Smart textile systems
5.1	Categories
5.1.1	General
5.1.2	Systems without energy or communication function (NoE-NoCom)
5.1.3	Systems with energy function, but without communication function (E-NoCom)
5.1.4	Systems with communication function but without energy function (noE-Com)
5.1.5	With energy and communication function (E-Com)
5.2	Examples of “Smart textile systems” and their functional analysis
5.2.1	Medical application: monitoring of health situation
5.2.2	Occupational safety application: work wear and protective clothing
5.2.3	Leisure and fashion application
5.2.4	Garment based on thermal control by phase change materials (PCM)
5.2.5	Heated garment, car seats, etc. for comfort or protection
5.2.6	Irradiation system for medical therapeutics
5.2.7	Geotextiles applications
6	Considerations for standardization

- 6.1** **General**
- 6.2** **Verification of claimed performances**
- 6.3** **Innocuousness**
- 6.4** **Durability of properties**
- 6.5** **Product information**
- 6.6** **Environmental aspects**
- 6.7** **Examples of possible standardization of smart (intelligent) textile products and systems**

- 6.7.1** **Smart (intelligent) textile products — Phase change materials (PCM)**
- 6.7.2** **Smart textile systems — Heating textile with temperature control**

Page count: 22