



BSI Standards Publication

**Societal and citizen security - Guidance
for the security of hazardous materials
(CBRNE) in healthcare facilities**

National foreword

This Published Document is the UK implementation of CEN/TS 17159:2018.

The UK participation in its preparation was entrusted to Technical Committee SSM/1, Societal security management.

A list of organizations represented on this committee can be obtained on request to its secretary.

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

© The British Standards Institution 2018
Published by BSI Standards Limited 2018

ISBN 978 0 580 98709 0

ICS 11.020.99; 13.300; 13.310

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

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 30 April 2018.

Amendments/corrigenda issued since publication

| Date | Text affected |
|------|---------------|
|------|---------------|

TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

CEN/TS 17159

April 2018

ICS 13.300; 13.310; 11.020.99

English Version

**Societal and citizen security - Guidance for the security of
hazardous materials (CBRNE) in healthcare facilities**

Sécurité sociétale - Document d'orientation pour les
établissements de soins de santé relatif à la sécurité
des substances NRBCE tout au long de leur cycle de vie

Schutz und Sicherheit der Bürger - Leitfaden für die
Sicherheit von Gefahrstoffen (CBRNE) entlang ihres
Lebenszyklus in Gesundheitseinrichtungen

This Technical Specification (CEN/TS) was approved by CEN on 10 December 2017 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

| Contents | Page |
|--|-------------|
| European foreword | 4 |
| Introduction | 5 |
| 1 Scope | 6 |
| 2 Normative references | 6 |
| 3 Terms and definitions | 6 |
| 4 General guidance | 9 |
| 4.1 Context of CBRNE risks in HCF and other facilities within HCF responsibility | 9 |
| 4.1.1 General..... | 9 |
| 4.1.2 High-risk chemical materials/agents | 10 |
| 4.1.3 High-risk biological material..... | 10 |
| 4.1.4 High-risk radioactive sources and nuclear materials | 10 |
| 4.1.5 Explosives | 10 |
| 4.1.6 The relationship between security and safety | 11 |
| 4.2 CBRNE security management approach | 11 |
| 4.3 CBRNE security threat and risk assessment..... | 12 |
| 4.3.1 General..... | 12 |
| 4.3.2 CBRNE security threat and security risk assessment | 12 |
| 4.3.3 Graded Approach | 13 |
| 4.3.4 CBRNE security risk assessment..... | 14 |
| 4.3.5 Business impact analysis..... | 14 |
| 4.4 CBRNE security management policy | 14 |
| 4.5 CBRNE security design | 17 |
| 4.5.1 General..... | 17 |
| 4.5.2 Design and construction..... | 18 |
| 4.6 CBRNE security management plan | 19 |
| 4.7 CBRNE information security management | 19 |
| 5 General procedures | 20 |
| 5.1 Management, roles, and responsibilities | 20 |
| 5.2 Competencies | 21 |
| 5.3 Training..... | 21 |
| 5.4 Documentation | 22 |
| 6 Operational guidance | 22 |
| 6.1 Inventory analysis and classification | 22 |

| | | |
|--------------|---|-----------|
| 6.2 | Securing the supply chain | 23 |
| 6.2.1 | General..... | 23 |
| 6.2.2 | Transportation..... | 24 |
| 6.2.3 | Suppliers | 24 |
| 6.3 | Securing controlled areas | 24 |
| 6.3.1 | Designation of security controlled areas | 24 |
| 6.3.2 | Access control..... | 25 |
| 6.4 | People..... | 25 |
| 6.4.1 | General..... | 25 |
| 6.4.2 | Staff | 26 |
| 6.4.3 | Visitors..... | 29 |
| 6.4.4 | Patients | 29 |
| 6.5 | Communication and awareness..... | 30 |
| 6.6 | CBRNE security incident response..... | 31 |
| 6.6.1 | CBRNE security incident response plan..... | 31 |
| 6.6.2 | Notification of the authorities | 32 |
| 6.6.3 | Incident reporting | 32 |
| 7 | Evaluation of the CBRNE security management system | 33 |
| | Annex A (informative) Guidance for the implementation and operation phase of generic management systems in HCF | 34 |
| | Bibliography | 36 |

European foreword

This document (CEN/TS 17159:2018) has been prepared by Technical Committee CEN/TC 391 “Societal and citizen security”, the secretariat of which is held by NEN.

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.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

Protecting citizens, institutions, infrastructures and assets is one of the four key pillars of the EU's Counter-Terrorism Strategy. One of its aims is to detect and mitigate risks related to the acquirement and misuse of hazardous chemical, biological, radioactive or nuclear (CBRN) materials, such as those referred to in the EU CBRN action plan [1]. There are indications that terrorists would be interested in using some of these CBRN materials for executing attacks. Securing them and preventing unauthorized access to them is therefore key to preventing their misuse. In the action plan, EU member states have planned to enhance the security of CBRN materials.

One of the industries that uses these hazardous materials in their regular processes is the Health Care Industry. Possible risk scenarios for this industry could include the theft of CBRN material from hospitals to perform (complicated) malevolent attacks such as the contamination of major water supply systems, but also the production (and detonation) of an improvised explosive device (IED) containing chemical and/or radiological material in public areas that would cause panic and fear across Europe. Securing these materials in healthcare facilities (HCF) is therefore important.

This document provides guidance for the design and implementation of a *security* management approach and system to deal with security threats involving hazardous CBRNE materials.

Security management of hazardous materials also has a strong relationship with occupational health and safety (OH&S) management. This standard does *not* aim to provide guidance for safety management (i.e. occupational health and safety issues deriving from the improper use of CBRNE material) as these are already managed via different standards and guidelines. This relationship is discussed in 4.1.6.

NOTE It is important to emphasize that across the European Union there are several regulatory and legislative limitations for use of security techniques and technologies, so it is important to take these limitations into account. Use of the guidelines can vary based on the health care system in each country of the European Union.

1 Scope

This Technical Specification provides guidance for managing security of (high risk) chemical, biological, radioactive, nuclear or Explosive materials, such as those covered by the EU CBRN action plan, that are used within healthcare facilities (HCF); it covers the lifecycle of such materials within a HCF's span of control. In this Technical Specification these materials are referred to as 'CBRNE materials'.

It covers the protection of (high risk) CBRNE materials used in healthcare facilities against security threats relating to their deliberate misuse. It covers the protection of people, assets and information related to CBRNE materials.

This Technical Specification also applies to circumstances where healthcare is provided at locations remote from the normal location of the HCF.

This Technical Specification also provides guidance to all stakeholders that are responsible for each step in a lifecycle of CBRNE materials within the HCF such as administrator staff, facility management staff, logistics and transport staff, medical staff, waste management staff, domestic staff and security staff as well as visitors and contractors working on the HCF premises.

This Technical Specification can be applied as part of generic management systems such as EN ISO 9001 [2], EN ISO 22301 [3], ISO 22320 [4] and possibly ISO 28001 [14].

It does not apply to occupational health and safety issues deriving from the proper and improper use of such materials.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

CBRNE material

chemical, biological, radioactive, nuclear or explosive material that could harm society or individuals through their deliberate release, dissemination, or misuse and for which high levels of security are warranted

[SOURCE: EU CBRN Action Plan [1], adapted]

3.2

CBRNE security management

set of interrelated or interacting elements (system) for managing the security of CBRNE materials in organisations in order to prevent their deliberate misuse

3.3

design basis threat

DBT

description of the attributes and characteristics of potential insider and/or external adversaries who might attempt unauthorized removal of CBRNE materials or sabotage against which a physical protection system is designed and evaluated

[SOURCE: IAEA Development and Use of the Design Basis Threat [15], amended]