



BSI Standards Publication

European CBRNE glossary

National foreword

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English Version

European CBRNE glossary

Glossaire CBRNE européen

Europäisches CBRNE-Glossar

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European foreword

This document (EN 17173:2020) has been prepared by Technical Committee CEN/TC 391 “Societal and Citizen Security”, the secretariat of which is held by NEN.

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of an identical text or by endorsement, at the latest by March 2021, and conflicting national standards shall be withdrawn at the latest by March 2021.

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1 Scope

This document contains terms and definitions for CBRNE (chemical, biological, radiological, nuclear, explosive) applications.

Common understanding and communication is important in the implementation of an effective CBRNE response and this communication will be most effective if there is common understanding of the terms used. Many of the terms and definitions listed here have been widely used for many years, while others are the result of cross-cutting experience of areas of CBRNE. The gradual evolution of our understanding of CBRNE and response measures means that CBRNE terminology will continue to develop.

This document is dedicated to first responders, administrative staff, industry representatives and researchers.

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.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

A1 and A2

categories to determine the type of packaging for transport of radioactive material, corresponding to the maximum activity, expressed in Becquerel

Note 1 to entry: A1 refers to a non-dispersible solid radioactive material or a sealed capsule containing radioactive material.

Note 2 to entry: A2 refers to the normal occurrence of radioactive material.

Note 3 to entry: The maximum Becquerel values for A1 or A2 differ for various nuclides.

Note 4 to entry: See ADR.

3.2

abandoned chemical weapons

chemical weapons, including old chemical weapons, abandoned by a state after 1 January 1925 on the territory of another state without the consent of the latter

3.3

absorbed dose

energy from ionising radiation absorbed per unit mass

Note 1 to entry: Expressed in the unit gray (Gy). absorbed dose

3.4**accident**

unplanned and unintended event that interrupts an activity and sometimes causes injury or damage, including operating errors, equipment failures and other mishaps, the consequences or potential consequences of which are not negligible from the point of view of protection or safety

3.5**active decontamination**

employment of chemical, biological or mechanical processes to remove or neutralize chemical, biological or radioactive materials

Note 1 to entry: Active decontamination is conducted when contamination will adversely affect the operational capabilities.

Note 2 to entry: There are three levels of active decontamination employed by operational units: immediate, operational and thorough decontamination.

Note 3 to entry: See "Passive decontamination".

3.6**Acute Exposure Guideline Level****AEGL**

toxicologically substantiated maximum exposure level intended for the protection of the general public against a once-in-a-lifetime, or rare exposure

Note 1 to entry: It represents the airborne concentration of a substance at or above which it is predicted that the general public could experience:

- 1) notable discomfort (AEGL-1);
- 2) irreversible or other serious, long-lasting effects or an impaired ability to escape (AEGL-2); or
- 3) life-threatening health effects or death (AEGL-3).

Note 2 to entry: AEGL values are defined for a variety of times of exposure.

Note 3 to entry: See: Exposure limits value.

3.7**Acute Hazard Area**

potential area where the radiation levels are expected to be sufficiently high to indicate that active measures should be adopted to reduce exposure

Note 1 to entry: Unprotected personnel who remains in this area for a significant period can be anticipated to receive acute hazard doses which are high enough to cause short-term incapacitation, lasting effects to health or death from acute radiation syndrome.

Note 2 to entry: Operations by first responders within this area are restricted to mission critical tasks only.

Note 3 to entry: See: Acute hazard dose.

3.8

acute hazard dose

potential receive doses, in the Acute Hazard Area, within 24 hours, which is high enough to cause some short-term incapacitation, but full recovery is expected

Note 1 to entry: Doses are regulated on national levels.

Note 2 to entry: See: Acute Hazard Area.

3.9

acute infection

rapid onset of disease with a relatively short duration of symptoms and resolution within days (see in comparison: chronic infection)

Note 1 to entry: Acute viral infections are typically observed with pathogens such as influenza virus and rhinovirus, but also with very severe infections like Ebola haemorrhagic fever.

Note 2 to entry: It is important to distinguish viral from bacterial infections, because acute bacterial infections can be treated with antibiotics, while (some) acute viral infections are treated with antiviral drugs.

3.10

European Agreement concerning the International Carriage of Dangerous Goods by Road ADR

agreement which set requirements for the trans boundary road transport of dangerous goods

Note 1 to entry: See: Dangerous goods.

3.11

ADR classes

classes of dangerous goods

dangerous goods thirteen level classification system which is based on materials hazardous properties

EXAMPLE Explosives, toxic and infectious substances or radioactive material.

3.12

ADR label

regulations for the transport of dangerous goods (ADR) specified hazard symbol labels for dangerous goods

Note 1 to entry: A label is form of square (i.e. diamond-shaped set at an angle of 45°), in distinctive colours, and in generally contains a hazard symbol. A label also contains a class number, an UN number, or a word or phrase describing the hazard (e.g. FLAMMABLE).

3.13

aerogenic infection

airborne infection

infection with viruses, bacteria or fungi (or their spores) by inhalation of the organisms

Note 1 to entry: It can be distinguished between droplets (organisms that are suspended in the air on water droplets, > 100 µm) or aerosols (organisms suspended on nuclei of droplets, dust particles or other carrier substances < 10 µm).

3.14**Agent Orange**

military term for a mixture of 2,4,5-Trichlorophenoxyacetic acid and 2,4-Dichlorophenoxyacetic acid (TCDD)

Note 1 to entry: It was used as a defoliant from 1965 to 1971 during the Vietnam War.

3.15**agroterrorism**

deliberate malicious introduction of an animal or plant disease into the food chain with the goal of generating fear, causing economic losses and impaired food security by disruption or damage of a country's agriculture, and/or undermining social stability

3.16**alarm**

indication from any source (signal or message from a person or device) that an emergency exists or a chemical, biological, radiological and nuclear attack or release other than attack may have occurred and required actions to response

Note 1 to entry: See: Instrument alarm, warning.

3.17**alarm level**

lowest measurement value of the concentration of a substance, which can be detected by a sensor with confidence

Note 1 to entry: Alarm levels can be set by calibration and can be adjustment.

Note 2 to entry: Alarm levels typically are described low level, medium level and high level.

Note 3 to entry: Alarm levels are referred to as the detection limit or sensitivity.

3.18**ambient dose equivalent**

operational quantity used for assessing effective dose in area monitoring

Note 1 to entry: The ambient dose equivalent $H^*(d)$ at a point in a radiation field is the dose equivalent that would be produced by the corresponding expanded at a depth d on the radius opposing the direction of the aligned field.

3.19**ambient monitoring**

methods for identifying hazardous substances and determining their amount in air, dust, soil and water or materials in order to monitor human or animal exposure

3.20**ammunition**

generic term related mainly to articles of military application consisting of all kind of bombs, grenades, rockets, mines, projectiles and other similar devices

Note 1 to entry: For civilian purposes ammunition is used for small firearms.

3.21

analysis time

time that a detection instrument needs to detect and identify a threat substance

Note 1 to entry: The analysis time is an important performance indicator for a detection instrument when detection is to be performed in a time sensitive scenario.

3.22

analytical technique

fundamental scientific phenomenon that has proved useful for providing information on the composition of substances

3.23

analytic method

specific application of analytic technique to solve an analytic problem

3.24

annual limit of intake

ALI

activity of a specific radionuclide, which, if inhaled or ingested by a worker or member of the general public, corresponds to the corresponding annual dose limit

3.25

antidote

drug (with a known action mechanism) given to a patient to counteract the toxic effects of a poison by modifying its toxicokinetics or toxicodynamics, and whose administration reliably produces a significant benefit

3.26

antitoxin

antibodies derived from plants, animals or microorganisms that counteract a specific toxin

Note 1 to entry: OR An antibody with the ability to neutralize a specific toxin.

3.27

as low as reasonably achievable

ALARA

risk management principle that mandates the minimum exposure of personnel to chemical, biological, radiological and nuclear hazards, subject only to the overriding demands of the operational mission

3.28

assembly point

area at the outer cordon for people assembling and awaiting evacuation from the scene

See: Assistance centre, Annex A.

3.29

assessment

process and the result of analysing systematically and evaluating the hazards associated with agents, sources and practices, and associated protection and safety measures

3.30**assistance centre**

any facility (whether physical or virtual) set up during response to and recovery from an emergency to provide a range of assistance to different categories of people affected by the emergency

3.31**asymptomatic carrier****healthy carrier**

person, animal or other organism which contracted an infectious agent without showing any apparent signs of the disease

Note to entry 1: Asymptomatic carriers are capable of transmitting the agent to others.

3.32**atomic energy**

electric energy or heat that is produced by making use of the release of energy from nuclear reactions, more specifically in the fission or the fusion of the nucleus

3.33**authorised carrier**

person or entity which arranges the transport of radioactive material including special fissile material on its own behalf or on behalf of others, in their name or on its own, even if using the means of others responsible for the staff, vehicles and structures which are made available

Note 1 to entry: In some countries, carriers previously approved by the competent authorities can only carry out transportation by land, sea or air of special fissionable material in any quantity of radioactive material.

Note 2 to entry: See: Carrier.

3.34**autoignition temperature**

lowest temperature at which substances will spontaneously ignite in a normal atmosphere without an external source of ignition, such as a flame or spark

Note 1 to entry: This temperature falls as the pressure or concentration of oxygen increases.

3.35**avirulent**

lacking virulence (ability) of bacterium, virus, fungus or parasite infect an animal and/or human without inducing a clinical disease

Note 1 to entry: Infection can be verified by determining the immune response.

3.36**background radiation**

continuously present radiation in the environment which is emitted from a variety of natural and artificial sources

Note 1 to entry: See: Natural background radiation.

3.37

bacterium

prokaryotic, in most cases a single-cell, self-reproducing microorganism of few micrometres in size, lacking a true nucleus and organelles

Note 1 to entry: It is surrounded by a cytoplasmic membrane and in most cases additionally by a cell wall.

Note 2 to entry: Some of bacterium are capable to induce disease in humans, animals or plants.

3.38

binary device

chemical weapon or system containing relatively non-toxic substances (precursors or key components), producing a chemical warfare agent when mixed and allowed to react

Note 1 to entry: When the ammunition (bomb, projectile, grenade, etc.) is fired, the initial substances are mixed and allowed to react, producing a chemical warfare agent.

3.39

binary explosive

two component explosive which contains two safe-to-handle compounds

Note 1 to entry: The final explosive is prepared by mixing both compounds before use.

3.40

Biological agent

B

microorganisms (bacteria, viruses, fungi or endoparasites including genetically modified organisms) and biological toxins which may induce an infection, disease or allergy in humans, animals or plants

Note 1 to entry: Biological agents can be misused in criminal acts, bioterrorism or biological warfare.

3.41

biological hazard

biohazard

biological substances like microorganisms or biological toxins that pose a threat to the health of humans, animals or to other living organisms

Note 1 to entry: National and international authorities have categories of various agents and diseases in levels of biohazard.

Note 2 to entry: See: Biological agents.

3.42

biological toxin

biotoxin

toxic substance explicitly derived from living organisms, like non-replicative, non-infectious material but which can be extremely hazardous even in small quantities

Note 1 to entry: Biological toxin can be used for contaminating of food, water supplies and to target specific individuals.

Note 2 to entry: Toxin that have been considered to be used as weapon include ricin, abrin, botulinum, staphylococcal enterotoxin B (SEB) and Tricholthece Mycotoxins (T2s).

3.43**biological weapon**

device, that consist of the biological agent and the dissemination mechanism and releases a biological agent or pathogen such as bacteria or viruses that are harmful to humans or animals and/or vegetation

3.44**Biological Weapons Convention****BWC**

arms control agreement, Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction

Note 1 to entry: The BWC was the first multilateral disarmament treaty banning an entire category of weapons.

Note 2 to entry: It opened for signature in 1972, entered into force in 1975, and enjoys almost universal membership today.

3.45**biomarker**

measurable characteristic (e.g. substance or alteration), which can be used as an indicator for a biological state like exposure or illness

3.46**biomonitoring****biological monitoring**

measures to examine harmful substances or metabolites in exposed individuals body fluids (bound to proteins or nucleic acids) to estimate body burden and potential health risk

3.47**biorisk**

combination of the probability of occurrence of a particular harmful event and the severity of the harm when the source of harm is a biological agent

Note 1 to entry: The source of the biological agent can be a natural, unintentional exposure, accidental release or loss, theft, misuse, diversion, unauthorised access or intentional unauthorised release.

3.48**biosafety**

development and implementation of administrative policies, work practices, facility design and safety equipment to prevent the transmission of biological agents to laboratory personnel, other persons and the environment

3.49**biosecurity**

measures of the protection of high-consequence microbial agents, technologies, materials and toxins as well as critical relevant information against theft or diversion by those who intend to misuse them intentionally

3.50**bioterrorism**

threat of or an intentional release or dissemination of biological agents to cause fear, illness or death in humans, animals or plants and/or disrupt social, economic or political stability

3.51

bioterrorism-relevant agent

biological agent with the potential to be used by non-state actors in a terrorist attack (bioterrorism)

3.52

blast

rapid expansion of gases at high pressure and temperature by a result of an explosion

3.53

blasting

process to loosening e.g. rocks and soil by the use of explosives

Note 1 to entry: See: Blasting explosive, civilian explosive.

3.54

blasting explosive

explosive in civil use, e.g. in quarrying, road construction, and demolition

Note 1 to entry: See: Civilian explosive.

3.55

blister agent

vesicant

chemical warfare agent that cause blistering of the skin (chemical burns) as well as severe skin, eye and mucosal pain and irritation

Note 1 to entry: Larger doses can cause death. Effects arise from liquid or vapour contact with any exposed skin and mucous membranes (airways, eyes).

EXAMPLE 'mustards': sulphur mustard and nitrogen mustard, 'arsenicals': Lewisite and phosgene oxime (not a 'true vesicant', but able to create solid lesions).

3.56

blood agent

chemical warfare agent that injures a person by interfering with cell respiration

Note 1 to entry: Is used as an umbrella term or synonym for cyanides.

3.57

boiling point

temperature at which a substance starts to change from the liquid into the gaseous physical state

3.58

bomb

explosive device that is placed, dropped, thrown or projected, designed to explode on impact or when detonated by a timing, proximity, or remote-control device

3.59

bomb suit

protective suit designed to protect against the shock from a blast as well as shrapnel from the bomb

Note 1 to entry: Used by Explosive Ordnance Disposal (EOD) personnel.

3.60**booby trap**

device (normally improvised) designed to be triggered by an unsuspecting victim

Note 1 to entry: There are numerous common varieties of booby traps designed to trigger an explosive device with the intention to cause severe injury or death.

Note 2 to entry: See: IED.

3.61**booster**

Part of the explosive train whose function is to transfer and enhance the detonation wave from the initiating explosive to a level sufficient to detonate the next part of the explosive train (other booster or main charge)

3.62**brisance**

DEPRECATED: measure of the work capacity of a high explosive e.g. accelerating matter such as metal fragments

Note 1 to entry: The detonation pressure is the major factor that has influence on brisance.

Note 2 to entry: Brisance is an obsolete term.

3.63**bulk detection**

act of finding large (bulk) quantities of explosives

Note 1 to entry: See: Trace detection, explosives detection system.

3.64**burster****bursting charge**

small charge of explosive to open projectiles, or other ammunition in order to disperse their contents

3.65**calibration gas**

reference gas or gas mixture used as comparative standard in the calibration of analytical instruments

Note 1 to entry: A calibration gas is of a precisely defined nature or composition, like zero gas.

Note 2 to entry: A calibration gas is traceable to a national or international standard. Traceability is the unbroken chain of comparisons to an acceptable international standard.

Note 3 to entry: The calibration gas standard establishes a known analyser response to a certified chemical component concentration.

3.66**calibration**

<measurement instrument> comparison between equipment items, one of which is a measurement standard of known accuracy, to detect, correlate, adjust and report any variation in the accuracy of the items

3.67

canine detection

use of dog for detection of e.g. explosives or drugs

Note 1 to entry: See: Explosive Detection Dog.

3.68

cap sensitivity

measure of the minimum energy, pressure, or power required for initiation of a detonation

3.69

capability

demonstrable ability to respond to and recover from a particular threat or hazard

3.70

capability gap

gap between the current ability to provide a response and the actual response assessed to be required for a given threat or hazard

3.71

capability programme

programme to develop a range of capabilities that underpin national resilience to disruptive challenges

3.72

capability status

assessment of the level of capability in place

3.73

capability target

level of capability required by the planning assumptions

3.74

carrier

person, organisation or state administration that carries out the transport of radioactive material

Note 1 to entry: Term includes those entities that operate the transport for hire, assign it under a hire contract, occasionally hire it out for a fee (in some countries: referred to as a public carrier or contract), or which operate the transport privately (in some countries referred to as a private transporter).

Note 2 to entry: See: Authorized carrier.

3.75

carrier gas

purge gas introduced so as to transport a sample through the separation unit of a gas chromatograph for analytical purposes

Note 1 to entry: Typical carrier gasses are helium, hydrogen, nitrogen, and argon.

[SOURCE: EN ISO 14532:2017, 2.4.4 modified – Notes 1 to entry have been added.]

3.76**cartridge**

casing or shell surrounding a projectile, a propellant and a primer

Note 1 to entry: The purpose of the cartridge is to contain its content but in the case of ammunition cartridges it also seals the firing chamber to allow the projectile to exit to the front of the barrel.

3.77**Case Fatality Rate****CFR**

measure of the number of deaths in a population suffering from the same disease or injury (typically expressed in %)

Note 1 to entry: In comparison: mortality rate describes the proportion of deaths in a population.

Note 2 to entry: See: Mortality rate, fatality rate.

3.78**casualty**

person physically or mentally injured or killed by accident or incident

Note 1 to entry: See: Victim.

3.79**casualty decontamination**

neutralisation or removal of chemical, biological or radioactive agents or materials from a casualty, allowing the partial or total removal of individual protective equipment by the casualty and carers, thereby minimising further risks to health and facilitating subsequent treatment

3.80**Chemical Abstracts Service registry number****CAS number****CAS-RN**

unique numerical identifier to every chemical substance described in open-access scientific literature

Note 1 to entry: CAS numbers are assigned to groups of substances. A CAS-RN is separated by hyphens into three parts: the first comprises up to seven digits, the second comprises two digits, and the third is a single digit serving as a check digit.

Note 2 to entry: The CAS registry is a collection of disclosed chemical substance information, containing more than 88 million organic and inorganic substances and 65 million protein and DNA sequences.

3.81**casualty evacuation**

controlled process of moving any person who is wounded, injured, or ill to and/or between medical treatment facilities

3.82**casualty management**

group of post-incident medical capabilities that are applied to preserve the health of the operators, to deliver optimal care to casualties, and to maximize the rate at which casualties return to normal conditions

3.83

casualty collecting point

location where seriously injured are collected initially

Note 1 to entry: See: Annex A.

3.84

CBRN Sampling and detection module

CBRNET

certified module and part of the European Civil Protection capabilities

Note 1 to entry: The modules are temporarily self-sufficient and are able to sustain an operation in a contaminated and/or oxygen deficient environment.

Note 2 to entry: The task of modules is to carry out/confirm the initial assessment, including:

- the description of the dangers or the risks,
- the determination of the contaminated area,
- the assessment or confirmation of the protective measures already taken,
- to perform qualified sampling, to mark the contaminated area, to predict and monitor the situation, to do a dynamic assessment of the risks, including recommendations for warning and other measures, to provide support for immediate risk reduction.

3.85

CBRN agent

generic term used for CBRN substances in solid, liquid, aerosolized or gaseous forms that are designed to incapacitate or kill a person

3.86

CBRNE incident

situation that might be, or could lead to, a disruption, loss, emergency or crisis, resulting from the use of CBRNE weapons or devices; the emergence of secondary hazards arising from counter-force targeting; or the release of toxic industrial material into the environment, involving the emergence of CBRN hazards or effects

Note 1 to entry: CBRNE incidents are either 'suspected' or 'confirmed' as appropriate to the situation.

[SOURCE: EN ISO 22300:2018, 3.111, modified – CBRNE incident characteristic have been added]

3.87

CBRN mobile laboratory

laboratory system that provides rapid on scene evidential results to be generated routinely and to reduce the logistics and transportation burden

Note 1 to entry: The recommendation is to use a single laboratory system specific for C, B, RN or forensic capacity.

Note 2 to entry: The structure if laboratory can be light fieldable tent for short-term missions to heavier and long-term operation based on single C/B or mixed C/B/RN integrated laboratory systems on wheel, in container or in trailer.

Note 3 to entry: It is designed to be operated by a rapidly deployable staff.

Note 4 to entry: It provides flexible and affordable working area for integrated or hybrid equipment and systems that combine the advantages of current and emerging technologies.

3.88

CBRN reconnaissance vehicle

vehicle-mounted integrated system to reconnaissance platform can detect chemical, biological agents and radiation either point detection and or stand-off detection and which is operated in CBRN contaminated environment

Note 1 to entry: Vehicle operator perform operations in an environmentally controlled space that protect from all known CB agents and nuclear particles.

Note 2 to entry: Vehicle have capability to analyse and identify samples.

Note 3 to entry: Information received from the sensors is automatically prepared for electronic transmission through the CBRN warning and reporting system.

3.89

CBRN substances

chemical, biological, radiological agents and nuclear material

Note 1 to entry: See: Chemical agents, biological agents, radioactive material and nuclear material.

3.90

CBRN system

CBRNE system

system dedicated to provide indication (detection) and warning of emergency situations involving hazardous material or CBRNE substances and which incorporates various sensor integrations, data communications, databases, system services a control panel with user interface

Note 1 to entry: See: DIM, detector.

3.91

CBRN terrorism

threat of or an intentional release or dissemination of chemical, biological or radioactive material/ agents to cause fear, illness or death in humans, animals or plants and/or disrupt social, economic or political stability

EXAMPLES

- RN terrorism involving nuclear and radioactive material.
- Bio terrorism involving biological agents.
- CWA terrorism involving chemical weapons agents and/or toxic industrial chemicals.
- Agroterrorism involving biological agents.

3.92

CBRNE

chemical, biological, radiological, nuclear and explosive

3.93

CBRNE database

large collection of CBRNE related data organised especially for rapid search and retrieval

3.94

CBRNE resilience

ability to absorb and adapt the impact of CBRNE incidents in a changing environment

[SOURCE: EN ISO 22300:2018 modified – CBRNE have been added]

3.95

cell culture

growth of cells under controlled conditions, generally outside of their natural environment

3.96

chain of custody

<sampling> chronological documentation which is showing the sample collection, custody of sample(s), legal significance leaving a sampling site, transfer, receipt in analysing laboratory, analysis by proper protocols, storage proper manners, and disposal of the sample

Note 1 to entry: This ensures that any results in report relate beyond all reasonable doubt to a particular individual. The sample container(s) seals will show a sample has been disturbed.

3.97

Chemical agent

C

substance which is intended for use to kill, seriously injure, or incapacitate humans through their physiological impact

Note 1 to entry: Chemical agents can affect different physiological systems by entering the human body through ingestion, skin or eye absorption, and inhalation.

Note 2 to entry: They are categorized according to their physiological effects: nerve; blood and choking; and blistering agents.

Note 3 to entry: A second useful operational classification of chemical agents is in terms of their persistency.

3.98

chemical decontaminant

substance to neutralise CBRN contaminant

Note 1 to entry: Most of the current decontaminants used in the detoxification of CBRN contaminants can be considered reactive chemicals, or chemicals that readily react with another chemical without the need for stirring, heating, or shaking.

Note 2 to entry: Typical types of chemical decontaminants are oxidizing agents, strong bases, and microemulsions.

3.99**Chemical Weapons Agent****Chemical Warfare Agent****CWA**

toxic substance developed for military use intended to cause death or serious injury

Note 1 to entry:

- 1) pulmonary agents (lung-damaging agents, also called choking agents),
- 2) 'blood' agents (cyanides),
- 3) blistering agents (vesicants), and
- 4) nerve agents.

Note 2 to entry: In addition to the above, there is a group of 'incapacitating agents' or 'non-lethal agents' which are intended to cause incapacitation (a temporary inability to perform one's duties). The most important examples are BZ (causing hallucinations) and fentanyl derivatives (causing unconsciousness).

Note 3 to entry: Riot-control agents, like 'tear gases', 'pepper spray' or vomiting agents, are not recognized as incapacitating agents or CWA if they are used by law enforcement.

Note 4 to entry: Most chemical weapons agents are liquids (except for riot-control agents and BZ - 3-Quinuclidinyl benzilate, which are solids at temperatures and pressures normally encountered).

3.100**Chemical Weapons Convention****CWC****Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction**

arms control agreement which was signed in 1993, it entered into force in 1997 and regulates:

- 1) state party obligations (art. I: never to develop, produce, otherwise acquire, stockpile, or retain chemical weapons and to destroy all chemical weapons stockpiles as well as all production facilities),
- 2) the destruction of chemical weapons (art. IV), and
- 3 the shutdown of production facilities (art. V)

Note 1 to entry: For preventing the spread of precursors and toxic chemicals that may be used as weapons, their development, production, acquisition, retaining, transfer and use are subject to limits (art.VI) and inspections. Implementation of the Convention is monitored by the OPCW – Organization for the Prohibition of Chemical Weapons.

3.101**chemical effects**

See: health effects of chemicals

3.102**chemical weapon**

weapon specifically designed to cause death or other harm through the toxic properties of chemicals

Note 1 to entry: It consists of a substance or agent (CWA) and of some form of carrier or container (e.g. ammunition).

3.103

chemical weapons mobile destruction facility

mobile destruction facility consists of container-size units that can load equipment on a trailer bed

Note 1 to entry: It can be assembled and disassembled repeatedly and can travel around the country to conduct CWA destruction operations. The facility is set up in an appropriate location close to the temporary storehouse, with due attention to safety and the environment.

3.104

chemical weapons precursor

chemical which is useful in the manufacture of chemical weapons

3.105

choking agent

see pulmonary agent

3.106

chronic infection

slowly developing infection which duration is in the order of weeks or months

Note 1 to entry: The agent is detectable in the chronic phase and might be eliminated by the immune system or an adequate treatment (for example hepatitis B, herpes).

Note 2 to entry: An acute infection can become a chronic infection.

3.107

civil resilience

resilience concerning civilian population and property which is built up through governmental efforts

3.108

civil shelter

blast protected, gastight and overpressurized space with filtration unit inside

Note 1 to entry: Shelters can be designed for many different purposes.

Note 2 to entry: Civil shelters can be fully operational status continuously and/or can be dual-used in daily life (warehouse, metro station, underground car park, etc.).

3.109

civilian explosive

explosive that is commercially produced for non-military use

EXAMPLE Dynamite, ANFO (ammonium nitrate/fuel oil), and emulsion explosives, see also blasting explosives.

3.110

clean area

clean zone

contamination and other hazard free area beyond the hot and warm zones where access is restricted for emergency response operations

Note 1 to entry: The command post and support functions are located in the clean area.

Note 2 to entry: See: Cold zone, Annex A.

3.111**clearance decontamination**

decontamination of equipment and/or personnel on temporary or permanent removal from an operation to a standard sufficient to allow unrestricted transportation, maintenance, employment and disposal

3.112**CLP Regulation**

European Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures) which adopts the United Nations' Globally Harmonized System on the Classification and Labelling of Chemicals (GHS) across all European Union countries

Note 1 to entry: CLP Regulation is adopted through a suitable national or regional legal mechanism to ensure it becomes legally binding.

Note 2 to entry: It is expected to facilitate global trade and the harmonized communication of chemical hazard information and to promote regulatory efficiency. It complements the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Regulation (EC) No 190) and replaces previous system within the Dangerous Substances Directive (67/548/EEC) and the Dangerous Preparations Directive (1999/45/EC).

Note 3 to entry: The CLP Regulation incorporates the classification criteria and labelling rules agreed at UN level, the so-called Globally Harmonized System of Classification and Labelling of Chemicals (GHS). It introduces new classification criteria, hazard symbols (pictograms), hazard statements and precautionary statements, while taking account of elements, which are part of the current EU legislation.

3.113**CMR Substance**

substance which producing carcinogenic, mutagenic and/or reprotoxic effects

Note 1 to entry: See: Health effects of chemicals, CLP Regulation.

3.114**cold line**

border line between cold zone and outer zone/area

Note 1 to entry: Cold line is same as outer cordon line.

Note 2 to entry: See: Cordon, Annex A.

3.115**cold zone**

contamination and other hazard free area beyond the hot and warm zones where access is restricted for emergency response operations

Note 1 to entry: The command post and support functions are located in the area.

Note 2 to entry: This is also referred to as the green zone or support zone.

Note 3 to entry: See: Clean area, Annex A.

3.116

Collective Protection

COLPRO

facilities or system equipped with air filtration devices and air locks which provide personnel with a CBRN hazard-free environment for performing critical work and obtaining rest and relief in order to sustain operation

Note 1 to entry: See: fixed COLPRO, Mobile COLPRO, Transportable COLPRO, Hybrid COLPRO

3.117

combustible

<CBRNE> for material with a flashpoint above 37,8 °C, ability to burn

Note 1 to entry: Combustible materials are less easily ignited than flammable materials as their flashpoint is above 37,8 °C.

3.118

command

exercise of authority that is associated with a role or rank within an organisation, to give direction in order to achieve defined objectives

3.119

command levels

hierarchical framework of command structure for command and control of major incident, disaster and crises management

3.120

command protocol

established procedure(s) defining lines of command and responsibility in the response to an incident or emergency

3.121

commander

person who exercises authority within their organization, to give direction in order to achieve defined objectives

Note 1 to entry: See: Incident Commander.

3.122

committed effective dose

measure of radiation risks resulting from the intake of radionuclides in the human body

Note 1 to entry: Its assessment is very complex, requiring specialized equipment to measure a person directly (with a whole body counter) or an assessment of the radioactivity content in excreta (an indirect method using radiotoxicology).

Note 2 to entry: Committed effective dose calculations are made over a lifetime – i.e. 70 years for infants, 50 years for adults.

3.123

common operating picture

single display of information collected from and shared by more than one agency or organisation that contributes to a common understanding of a situation and its associated hazards and risks along with the position of resources and other overlays of information that support individual and collective decision making

3.124

communicable disease

See: contagious disease

3.125

community resilience

ability of the society (or the communities) and/or individuals to absorb and adapt in a changing environment

3.126

compliance assurance

<radiological> competent authority's systematic programme which is aimed at ensuring that the requirement of ADR regulation is met for radioactive material

3.127

concentration limits

see exposure limit value

3.128

Concept of operations

CONOPS

high level description of how a defined system will operate to achieve defined strategic objectives

3.129

confinement system

prevention or control of releases of radioactive material to the environment in operation or in accidents

Note 1 to entry: Set of components and fissile materials specified by the designer and approved by the competent authority to maintain safety on critical issues during the transportation of radioactive material.

Note 2 to entry: See: Containment system.

3.130

confinement system for fissile material

system comprises fissile material and packaging components, specified by the designer and approved by the competent authority, which is adequate to maintain critical safety

3.131

confirmed identification

identification confidence level criteria for analysis samples suspected containing biological, chemical or mid-spectrum agent (toxins, synthetic viruses, and genocidal agents as mass-casualty agents having features of both chemical-warfare agent and biological-warfare agent)

Note 1 to entry: Identification confidence levels are provisional identification, confirmed identification and unambiguous identification.

See: Confirmed identification biological agents, confirmed identification chemical agents.

3.132

confirmed identification, biological agents

<biological> identification confidence level criteria for analysis samples suspected containing biological or mid-spectrum agent (toxins, synthetic viruses, and genocidal agents as mass-casualty agents having features of both chemical-warfare agent and biological-warfare agent)

Note 1 to entry: Identification of a mid-spectrum agent is confirmed when any two of the three criteria for provisional identification have been met in the presence of authentic reference standards (positive and negative controls) under identical experimental conditions.

Note 2 to entry: See: Provisional identification, unambiguous identification.

3.133

confirmed identification, chemical agents

<chemical> identification confidence level criteria for analysis samples suspected containing chemical agents

Note 1 to entry: Identification of a chemical agent is confirmed when one of the following criteria has been met:

— A complete spectrum acquired using a single spectrometric technique matches the corresponding reference spectra in a database. If the molecular ion is not present in the mass spectrum, techniques such as chemical ionization is performed to confirm the molecular mass of the compound.

— The chromatographic retention data acquired for the chemical agent during mass spectrometric analysis using selected ion monitoring (minimum of three ions) matches that of an authentic reference standard. The ratio of the three ions falls within 10 % of the values of an authentic reference standard run under identical experimental conditions in consecutive analyses. The ions should have coincident maxima, the same peak width at half height and exhibit a signal to noise ratio greater than three.

Note 2 to entry: See: Provisional identification, unambiguous identification.

3.134

conformity assessment

<CBRNE> activity to determine that a process, product, or service meets relevant technical standards and fulfils relevant requirements placing of explosives for civil use

3.135

confusion matrix

matrix or table containing information about actual and predicted classifications

Note 1 to entry: In the field of security and detection of threat items the predicted classifications are “alarm” and “no alarm” and the actual classifications are “presence” and “no presence” of a threat item.

3.136

consequence management

measures taken to protect public health and safety, restore essential services, and provide emergency assistance to governments, businesses, and individuals affected by the impacts of an emergency

3.137

contagious disease

biological agent inducing a specific disease which is (easily) transmissible by (direct) physical contact with the person or animal suffering from the disease, or with their secretions (without a vector)

Note 1 to entry: See: Transmissible infection.

3.139**containment system**

set of packaging components, specified by the designer which ensures the containment of radioactive material during transport

3.140**contamination**

presence or transfer of hazardous chemical, biological or radioactive substances/materials to personnel, structures, areas, mobile and immobile objects, surface, soil or water

Note 1 to entry: In the case of a person, it is usually referred to as 'external' (skin contamination) or 'internal' contamination (due to an intake by breathing and/or ingestion).

3.141**contamination control**

measures which ensure contamination is not transferred from an area that is already contaminated to an uncontaminated area through the orderly processing of personnel, equipment, and vehicles entering and leaving the contaminated area

3.142**contaminated area**

area in which protective measures are necessary, owing to actual or potential air contamination or surface contamination in excess of a specified level

Note 1 to entry: See: Hot zone, Annex A.

3.143**contamination control line**

line identifying the area contaminated to a specific level of the contaminant of interest

Note 1 to entry: See: Hot line, Annex A.

3.144**contamination control point**

portion of the contamination control line used by personnel to control entry to and exit from the contaminated area

Note 1 to entry: See Annex A.

3.145**contamination reduction zone**

uncontaminated area which contaminate by the movement of contaminated people or vehicles

Note 1 to entry: See: Warm zone, Annex A.

3.146**contingency plan**

prepared by a particular agency specifying the response to a potential incident within the agency's area of responsibility

3.147**control of spread**

limitation of spread, hazard containment and waste management

3.148

control zones

areas at dangerous substances incidents which based on safety and the degree of hazard

Note 1 to entry: Terms that are used to describe control zones; as the hot zone, exclusion zone, red zone, restricted zone, warm zone, contamination reduction zone, yellow zone, limited access zone, cold zone, support zone, green zone, clean zone.

Note 2 to entry: See: Annex A.

3.149

convention on assistance in the case of nuclear accident or radiological emergency

sets co-operation among States Parties and IAEA in case of nuclear accidents or radiological emergencies

Note 1 to entry: National points of contacts for requests' exchange, experts, equipment, and methodologies are indicated by States.

3.150

convention on early notification of a nuclear accident

notification system of nuclear or radioactive accidents involving facilities or activities

Note 1 to entry: States notifies and reports information about the event. IAEA acts as a hub.

Note 2 to entry: Points of contact are established.

3.151

convention on nuclear safety

regulations for land-based nuclear power facility high level safety

Note 1 to entry: Emergency preparedness plans are set up.

3.152

convention on mutual assistance and cooperation between customs administrations

prevention, detection, prosecution and punishment of infringements of national and Community customs provisions through enhanced cooperation and mutual assistance between national customs services

Note 1 to entry: The cross-border cooperation includes, amongst others, prevention, investigation and prosecution in cases of illicit traffic of nuclear material or materials or equipment intended for the manufacture of atomic, biological and/or chemical weapons.

3.153

convention on the physical protection of nuclear material

international transport regulation, domestic use storage and transport of nuclear material for peaceful purposes

Note 1 to entry: Convention provides for recovery and response in case of unauthorized removal.

3.154

convention on the transboundary effects of industrial accidents

regulation for States' response, assistance and exchange of information in industrial accident (not radiological or nuclear)

Note 1 to entry: A notification system (IAN - UN/ECE Industrial Accident Notification System) is in place.

3.155
cordon

border line of an area

Note 1 to entry: See: Inner cordon, outer cordon, Annex A.

[SOURCE: ISO/TS 17575-1:2016, 3.8]

3.156
counter terrorism

all measures taken to prevent and combat terrorism before, during and after hostile acts are carried out

3.157
countermeasures

actions to protect the public, buildings, critical infrastructures and private interests

3.158
crater

<explosive> hole in the surface made by the explosion of a bomb or shell

3.159
critical diameter

minimum diameter of an explosive that allows detonation

Note 1 to entry: The critical diameter can be affected by factors such as confinement.

3.160
critical function

service or operation the continuity of which needs to be ensured, in order to meet business objectives and/or deliver essential services

3.161
critical infrastructure

physical and information technology facilities, networks, services and assets which, if disrupted or destroyed, would have a serious impact on the health, safety, security or economic well-being of citizens or the effective functioning of governments in State

3.162
critical mass

quantity of fissile material required to ensure a self-sustaining nuclear chain reaction

Note 1 to entry: Below this amount, no nuclear reaction can continue spontaneously over time; above this quantity, a nuclear explosion may take place, under specific conditions.

3.163
Criticality Safety Index
CSI

<radiological> dimensionless number assigned to a fissile material package, to designate the degree of control of accumulation of packages, overpacks or freight containers containing fissile material during transportation in order to prevent accidental criticality of a set of packages

3.164

critical temperature

temperature above which the substance cannot exist in the liquid state at any pressure

[SOURCE: ISO 10286:2015, 748]

3.165

cross contamination

secondary contamination

process by which contaminated materials are unintentionally transferred from one object to another or another location

3.166

cross sensitivity

sensitivity to one substance that predisposes an individual to sensitivity to other substances that are related in chemical or physical structure

Note 1 to entry: Cross sensitivity with chemical can cause false positive detection.

3.167

D-value, biological

<biological> time required to reduce the level (infectious titre) of a given infectious agent by 90 % by a specific inactivation procedure, for example a given dose of irradiation or a specific heat treatment

3.168

D-value, nuclear

<radiological> quantity of radioactive material, which, if uncontrolled, could result in the death of an exposed individual or a permanent injury that decreases that person's quality of life

3.169

damage reduction

consequences minimize actions when the use of a threat substance cannot be prevented

EXAMPLE The use of bomb suits for risky EOD operations, physical protection or increased distance to the explosive threat.

3.170

dangerous goods

goods containing substances and articles, which have been identified as hazardous for transport and present a risk to people, property and the environment

Note 1 to entry: The transport requires an appropriate package.

Note 2 to entry: See: ADR.

3.171**decay**

<radiological> spontaneous transformation of one nuclide into a different nuclide

Note 1 to entry: It is accompanied by the emission of alpha particles, beta particles, neutrons and/or gamma rays from the nucleus.

Note 2 to entry: The 'speed' of a decay process is characterized by its half-life (i.e. the time taken for half of the atoms of a radionuclide or radioisotope to undergo decay and disintegrate into another nuclide).

Note 3 to entry: See: Half-life.

3.172**decay chain**

<radiological> decay of discrete radioactive decay products as a chained series of transformations

3.173**decommissioning**

<radiological> action for administrative, legal and technical process of taking a nuclear or radiological facility out of service by removing its residual radioactivity to a level that permits the radiological release of the property for unrestricted use by the general public

3.174**decontaminant**

substance used to encapsulate, remove, neutralise or diminish the toxicity of chemical, biological or radioactive contaminants

3.175**decontamination**

process of making personnel, objects or areas safe by absorbing, destroying, neutralising, making harmless encapsulating, diminishing, or removing chemical or biological agents and radioactive material

Note 1 to entry: Decontamination can be passive or active, reflecting the urgency of the operational and/or tactical situation.

Note 2 to entry: In radioactive material decontamination includes administrative and technical actions taken to allow the removal of some or all of the regulatory controls from a facility.

Note 3 to entry: See: Dry decontamination, wet decontamination.

3.176**decontamination shelter**

portable (rapid deploying) or fixed facility equipped with material used to support decontamination operations

3.177**decontamination shower**

simple single units, or elaborate systems with several lanes for ambulatory personnel who can decontaminate themselves or for casualties on stretchers

Note 1 to entry: Portable decontamination shower systems are designed as stand-alone units or as part of decontamination trailers and/or shelters.

3.178

decontamination station

location or building suitably equipped and organized where personnel and materiel are decontaminated from chemical, biological or radiological contaminants

3.179

decontamination zone

area usually located within the warm zone where decontamination is performed

Note 1 to entry: See: Warm zone, Annex A.

3.180

definitive identification

employment of multiple state-of-the-art, independent, established protocols and technologies by scientific experts in a nationally recognized laboratory to determine the unambiguous identity of a chemical, biological, radiological, and/or nuclear hazard with the highest level of confidence and degree of certainty necessary to support strategic-level decisions

Note 1 to entry: Four levels of identification associated with CBRN hazards: presumptive identification, field confirmed identification, laboratory validation identification, definitive identification.

Note 2 to entry: See: Unambiguous identification.

3.181

deflagration

fast reaction of an explosive with rate below the speed of sound in the material

Note 1 to entry: Deflagration propagates by the produced heat and atmospheric oxygen is not needed for propagation of the deflagration.

3.182

defoliant

chemicals used to cause plants to drop their leaves prematurely

Note 1 to entry: See: Agent Orange.

3.183

depleted uranium

uranium metal containing less of the isotope uranium-235 than in the natural Uranium (0,72 %)

Note 1 to entry: Depleted uranium delivers very low radiation doses per unit of mass. It has a high chemical toxicity.

Note 2 to entry: See: Special Nuclear Material.

3.184

deployable detector

instrument(s) system which is carried by an individual(s) in short distances

Note 1 to entry: Typically, mobile stationary sensors, compact-sized to carry, long-term battery operated and deployable either with vehicle or carrying.