

Commission Directive 2019/1832 of 24 October 2019 amending Annexes I, II and III to Council Directive 89/656/EEC as regards purely technical adjustments

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THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Council Directive 89/656/EEC of 30 November 1989 on the minimum health and safety requirements for the use by workers of personal protective equipment at the workplace<sup>(1)</sup>, and in particular Article 9 thereof,

Whereas:

- (1) Principle 10 of the European Pillar of Social Rights<sup>(2)</sup>, proclaimed at Gothenburg on 17 November 2017, provides that every worker has the right to a healthy, safe and well-adapted working environment. The workers' right to a high level of protection of their health and safety at work and to a working environment that is adapted to their professional needs and that enables them to prolong their participation in the labour market includes the use of personal protective equipment at the workplace if risks cannot be avoided or sufficiently limited by other means, measures, methods or procedures of work organisation.
- (2) The implementation of the directives related to the health and safety of workers at work, including Directive 89/656/EEC, was the subject of an *ex-post* evaluation, referred to as a REFIT evaluation. The evaluation looked at the directives' relevance, at research and at new scientific knowledge in the various fields concerned. The REFIT evaluation, referred to in the Commission Staff Working Document<sup>(3)</sup>, concludes, among other things, that the use of personal protective equipment concerns approximately 40 % of the EU's workforce, as risks at the workplace cannot be avoided by any other means, and that there is a need to address difficulties in implementing Directive 89/656/EEC.
- (3) In its Communication 'Safer and Healthier Work for All – Modernisation of the EU Occupational Safety and Health Legislation and Policy'<sup>(4)</sup>, the Commission reiterated that while the REFIT evaluation of the Union's *acquis* on occupational health and safety confirmed that the legislation in this field is generally effective and fit-for-purpose, there is scope for updating outdated rules and ensuring better and broader protection, compliance and enforcement on the ground. The Commission emphasises the particular need to consider the definition of personal protective equipment and its use by different services and sectors, as set out in Article 2 of Directive 89/656/EEC.
- (4) Directive 89/656/EEC lays down minimum requirements for the use of personal protective equipment used by workers at work, which is to be used when the risks

concerned cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organisation. To facilitate the establishment of the general rules required pursuant to Article 6 of Directive 89/656/EEC, Annexes I, II and III to Directive 89/656/EEC provide non-binding guidelines intended to facilitate and support the selection of appropriate personal protective equipment for the risks, activities and sectors concerned.

- (5) Regulation (EU) 2016/425 of the European Parliament and of the Council<sup>(5)</sup> lays down the provisions regarding the design, manufacture and marketing of personal protective equipment. Regulation (EU) 2016/425 modified the risk categorisation of products, to enable employers to understand and thus to deploy personal protective equipment, as further explained in the Personal Protective Equipment Guidelines<sup>(6)</sup> that clarify procedures and matters referred to in Regulation (EU) 2016/425. It is considered appropriate to update Annexes I, II and III to Directive 89/656/EEC in order to ensure consistency with the risk classification laid down in Regulation (EU) 2016/425 and to align them with terminologies used and types of personal protective equipment referred to in Regulation (EU) 2016/425.
- (6) Article 4(1) of Directive 89/656/EEC foresees that employers must provide personal protective equipment that complies with the relevant Union provisions on design and manufacture with respect to safety and health. Pursuant to that Article, employers who provide that personal protective equipment to their workers must ensure that such personal protective equipment fulfils the requirements laid down in Regulation (EU) 2016/425.
- (7) Annex I to Directive 89/656/EEC sets out a specimen risk survey table for the use of personal protective equipment and sets out types of risks that could occur in workplaces in relation to different parts of the body to be protected by personal protective equipment. Annex I should be amended to take account of new types of risks that appear in workplaces and to ensure consistency with the risk classification and the terminology used, in particular in Regulation (EU) 2016/425.
- (8) Annex II to Directive 89/656/EEC, which sets out a non-exhaustive guide list of types of personal protective equipment, should be amended to take account of the new types of risks identified in Annex I to that directive. Annex II should also be amended to include examples of personal protective equipment currently available on the market in conformity with Regulation (EU) 2016/425 and the terminology used in that Regulation.
- (9) Annex III to Directive 89/656/EEC sets out a non-exhaustive guide list of activities and sectors of activity that could require the provision of personal protective equipment, bringing together the risk classifications set out in Annex I to that directive and the types of personal protective equipment described in Annex II to that directive. Annex III to Directive 89/656/EEC should be restructured to ensure consistency between the terminology and classifications used across the three annexes and with Regulation (EU) 2016/425. This will enable employers from different sectors and industries to better identify and provide personal protective equipment that corresponds to specific

activities and the specific types of risks that workers are exposed to, as indicated by the risk assessment.

- (10) The Advisory Committee for Safety and Health at Work was consulted on the measures resulting from the adoption of the Commission's Communication 'Safer and Healthier Work for All – Modernisation of the EU Occupational Safety and Health Legislation and Policy' that are required to keep the Union's occupational health and safety legislation effective and fit-for-purpose.
- (11) In its 'Opinion on the Modernisation of Six OSH Directives to Ensure Healthier and Safer Work for All'<sup>(7)</sup>, adopted on 6 December 2017, the Advisory Committee for Safety and Health at Work recommends that Directive 89/656/EEC should be amended to enhance its relevance and effectiveness.
- (12) In a subsequent 'Opinion on technical updates to the annexes of the Personal Protective Equipment Directive (89/656/EEC)<sup>(8)</sup>', adopted on 31 May 2018, the Advisory Committee for Safety and Health at Work recommends that specific updates to Annex I, II and III to Directive 89/656/EEC, taking into account the latest technological developments in the field and ensuring consistency with Regulation (EU) 2016/425, should be carried out.
- (13) In preparing the current update of Annexes I, II and III to Directive 89/656/EEC, the Commission was assisted by experts representing Member States, who provided technical and scientific support.
- (14) In accordance with the Joint Political Declaration on explanatory documents<sup>(9)</sup>, adopted by the Member States and the Commission on 28 September 2011, Member States have undertaken to accompany, in justified cases, the notification of their transposition measures with one or more documents explaining the relationship between the components of a directive and the corresponding parts of national transposition instruments.
- (15) The measures provided for in this Directive are in accordance with the opinion of the Committee established by Article 17 of Council Directive 89/391/EEC<sup>(10)</sup>,

HAS ADOPTED THIS DIRECTIVE:

#### *Article 1*

Annexes I, II and III to Directive 89/656/EEC are replaced by the text in the Annex to this Directive.

#### *Article 2*

1 Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 20 November 2021 at the latest. They shall forthwith communicate to the Commission the text of those provisions.

When Member States adopt those measures, they shall contain a reference to this Directive or shall be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

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2 Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

*Article 3*

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

*Article 4*

This Directive is addressed to the Member States.

Done at Brussels, 24 October 2019.

*For the Commission*

*The President*

Jean-Claude JUNCKER

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## ANNEX

(1) Annex I to Directive 89/656/EEC is replaced by the following:

ANNEX RISKS IN RELATION TO THE BODY PARTS TO BE PROTECTED BY PPE (\*)  
 I (\*) This list of risks/parts of the body cannot be expected to be exhaustive. The risk assessment will determine the need to provide a PPE and its characteristics according to the provisions of this Directive.

PARTS OF THE BODY TO BE PROTECTED		RISKS																									
		PHYSICAL						CHEMICAL (including nanomaterial) (*)					BIOLOGICAL AGENTS (contained in)			OTHER RISKS											
		MECHANICAL					NOISE	THERMAL	ELECTRICAL		RADIATION			AEROSOLS	LIQUIDS	GASES AND VAPOURS	AEROSOLS	LIQUIDS	MATERIALS, PERSONS, ANIMALS, ETC.	DROWNING	OXYGEN deficiency	NON-VISIBILITY					
(1)	(2)	(3)	(4)	(5)	(6)	Heat and/or fire	Cold	Electric shock (7)	Static electricity	Non-ionizing (8)	Ionizing	Solid (9)	Liquid (10)	Immersion	Splashes, sprays, jets	Solids and liquids	Direct and indirect contact	Splashes, sprays, jets	Direct and indirect contact								
Head	Cranium																										
	Whole head																										
	Ears																										
	Eyes																										
	Face																										
	Respiratory system																										
	Hands																										
	Arms (parts)																										
	Foot																										
	Legs (parts)																										
	Skin																										
	Trunk/Abdomen																										
	Partial body																										
	Whole body																										

(1) Impact caused by falling or ejected objects, collision with an obstacle and high-pressure jets

(2) Falls due to slipping

(3) Falls from a height

(4) Vibration

(5) Static compression of parts of the body

(6) Mechanical injuries (abrasion, perforation, cuts, bites, wounds or stabs)

(7) Entanglement and trapping

(8) Direct or indirect contact

(9) Including sunlight (other than direct observation)

(10) Dusts, fumes, smokes and fibres

(11) Mists and fogs

(\*) See Recommendation 2011/696/EU on the definition of nanomaterial

(2) Annex II to Directive 89/656/EEC is replaced by the following:

## ANNEX II

### NON-EXHAUSTIVE LIST OF TYPES OF PERSONAL PROTECTIVE EQUIPMENT WITH REGARD TO THE RISKS THEY PROVIDE PROTECTION AGAINST

#### *Equipment for HEAD PROTECTION*

- Helmets and/or caps/balaclavas/headgears against:
  - Impacts caused by falling or ejected object
  - Collision with an obstacle
  - Mechanical risks (perforation, abrasion)
  - Static compression (lateral crushing)
  - Thermal risks (fire, heat, cold, hot solids including molten metals)
  - Electric shock and live working
  - Chemical risks
  - Non-ionizing radiation (UV, IR, solar or welding radiation)

- Hairnets against risk of entanglement

#### *Equipment for HEARING PROTECTION*

- Earmuffs (including e.g. earmuffs attached to a helmet, active noise reduction earmuffs, earmuffs with electrical audio input)
- Earplugs (including e.g. level-dependent earplugs, earplugs adapted to the individual)

#### *Equipment for EYE AND FACE PROTECTION*

- Spectacles, goggles and face shields (prescription lenses where appropriate) against:

- Mechanical risks
- Thermal risks
- Non-ionizing radiation (UV, IR, solar or welding radiation)
- Ionizing radiation
- Solid aerosols and liquids of chemical and biological agents

**Equipment for RESPIRATORY PROTECTION**

- Filtering devices against:
  - Particles
  - Gases
  - Particles and gases
  - Solid and/or liquid aerosols
- Insulating devices, including with an air supply
- Self-rescue devices
- Diving equipment

**Equipment for HAND AND ARM PROTECTION**

- Gloves (including mittens and arm protection) against:
  - Mechanical risks
  - Thermal risks (heat, flame and cold)
  - Electric shock and live working (antistatic, conductive, insulating)
  - Chemical risks
  - Biological agents
  - Ionizing radiation and radioactive contamination
  - Non-ionizing radiation (UV, IR, solar or welding radiation)
  - Vibration risks
- Finger stalls

**Equipment for FOOT AND LEG PROTECTION and anti-slip protection**

- Footwear (e.g. shoes, including in certain circumstances clogs, boots that may have steel toe-caps) to protect against:
  - Mechanical risks
  - Slipping risks
  - Thermal risks (heat, flame and cold)
  - Electric shock and live working (antistatic, conductive, insulating)
  - Chemicals risks
  - Vibration risks
  - Biological risks
- Removable instep protectors against mechanical risks
- Kneepads against mechanical risks
- Gaiters against mechanical, thermal and chemical risks and biological agents
- Accessories (e.g. spikes, crampons)

**SKIN PROTECTION — BARRIER CREAMS<sup>(11)</sup>**

- There could be barrier creams to protect against:
  - Non ionizing radiation (UV, IR, solar or welding radiation)
  - Ionizing radiation
  - Chemicals
  - Biological agents
  - Thermal risks (heat, flame and cold)

**Equipment for BODY PROTECTION/OTHER SKIN PROTECTION**

- Personal protective equipment for protection against falls from a height, such as retractable type fall arresters, full body harnesses, sit harnesses, belts for work positioning and restraint and work positioning lanyards, energy absorbers, guided-type fall arresters including an anchor line, rope adjustment devices, anchor devices that are not designed to be permanently fixed and that do not require fastening works before use, connectors, lanyards, rescue harness
- Protective clothing, including whole body (i.e. suits, overalls) protection and partial body (i.e. gaiters, trousers, jackets, waistcoats, aprons, kneepads, hoods, balaclavas) protection against:
  - Mechanical risks
  - Thermal risks (heat, flame and cold)
  - Chemicals
  - Biological agents
  - Ionizing radiation and radioactive contamination
  - Non-ionizing radiation (UV, IR, solar or welding radiation)
  - Electric shock and live working (antistatic, conductive, insulating)
  - Entanglement and trapping
- Lifejackets for prevention of drowning and buoyancy aids
- PPE for signalling the user's presence visually

(3) Annex III to Directive 89/656/EEC is replaced by the following:

ANNEX NON-EXHAUSTIVE LIST OF ACTIVITIES AND SECTORS OF ACTIVITY WHICH MAY REQUIRE THE PROVISION OF PERSONAL PROTECTIVE EQUIPMENT (\*) (\*) The risk assessment will determine the need to provide a PPE and its characteristics according to the provisions of this Directive. I. PHYSICAL RISKS

<b>Risks</b>	<b>Body part affected</b> <b>Type of PPE</b>	<b>Examples of activities where the use of the corresponding type of PPE may be necessary (*)</b>	<b>Industry and Sectors</b>
<b>PHYSICAL — MECHANICAL</b>			
<b>Impact caused by falling or ejected objects, collision with an obstacle and high-pressure jets</b>	<b>Cranium</b> <b>Protective helmet</b>	— Work on, underneath or in the vicinity of scaffolding and elevated workplaces	— Building construction — Civil engineering construction — Machinery manufacturing, installation and maintenance
		— Carcase Work and road work	— Shipbuilding — Mining works
		— Formwork's erection	— Energy production

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	and stripping	—	Infrastructure construction
	Scaffolding's	—	and maintenance
	assembly and installation	—	Iron and Steel industry
	Assembly and installation works	—	Slaughterhouses
	Demolitions	—	Railway shunting work
	Blasting works	—	Harbours, transport and logistics
	Work in pits, trenches, shafts and tunnels	—	Forest Industry
	Work in the vicinity of lifts, lifting gear, cranes, and conveyors		
	Works in underground workings, quarries, open diggings	—	
	Work with industrial furnaces, containers, machinery, silos, bunkers and pipelines		
	Slaughtering and Cutting line at slaughterhouses	—	
	Load handling or Transport	—	



		and storage
	—	Forest
	—	work
		Work
		on steel
		bridges,
		steel
		building
		construction,
		steel
		hydraulic
		structures,
		blast
		furnaces,
		steel
		works
		and
		rolling
		mills,
		large
		containers,
		large
		pipelines,
		boiler
		plants
		and
		power
		stations
	—	Earth
		and rock
		works
	—	Work
		with bolt-
		driving
		tools
	—	Work
		with blast
		furnaces,
		direct
		reduction
		plants,
		steelworks,
		rolling
		mills,
		metalworks,
		forging,
		drop
		forging
		and
		casting
	—	Work
		involving

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		travelling on bicycles and mechanically propelled bikes		
Eyes and/or face <b>Spectacles, goggles and face shields</b>	—	Welding, grinding and separating work	—	Building construction Civil engineering construction
	—	Manual hammering	—	Machinery manufacturing,
	—	Caulking and chiselling		installation and maintenance
	—	Rock working and processing	—	Shipbuilding
	—	Work with bolt- driving tools	—	Mining works
	—	Work on stock removing machines for small chippings	—	Energy production Infrastructure construction and maintenance
	—	Drop forging	—	Iron and Steel industries
	—	The removal and breaking up of fragments	—	Metal and Wood industries
	—	Spraying of abrasive substances	—	Stone carving
	—	Use of brush cutter or chainsaw	—	Gardening
	—	Dental and surgical procedures	—	Healthcare Forestry

Foot and leg (parts) <b>Footwear (shoes/ boots, etc.) with safety or protective toecap Footwear with metatarsal protection</b>	—	Carcase Work and road work	—	Building construction
	—	Erection and stripping of formwork	—	Civil engineering construction
	—	Scaffolding's assembly and installation	—	Machinery manufacturing, installation and maintenance
	—	Demolitions	—	Shipbuilding
	—	Blasting works	—	Mining works
	—	Working and processing of rock	—	Energy production
	—	Slaughtering and Cutting line works	—	Infrastructure construction and maintenance
	—	Transport and storage	—	Iron and Steel industry
	—	Work with moulds in the ceramics industry	—	Slaughterhouses
	—	Work with frozen meat blocks and preserved foods packaging	—	Logistic Companies
	—	Flat glass products and container glassware manufacture, working and processing	—	Manufacturing Industry
	—		—	Glass Industry
	—		—	Forest Industry

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	—	Conversion and maintenance work
	—	Forest works
	—	Work with concrete and prefabricated parts involving formwork erection and stripping
	—	Work in contractors' yards and warehouses
	—	Roof work
	—	Work on steel bridges, steel building construction, masts, towers, lifts, steel hydraulic structures, blast furnaces, steelworks and rolling mills, large containers, large pipelines, cranes, boiler plants and power stations
	—	Furnace construction, heating

		—	and ventilation installation and metal assembly work Work with blast furnaces, direct reduction plants, steelworks, rolling mills, metal works, forging, drop forging, hot pressing and drawing plants — Work in quarries and open diggings, coal stock removal — Work with moulds in the ceramics industry — Lining of kilns in the ceramics industry — Railway shunting work	
<b>Falls due to slipping</b>	<b>Foot Slip-resistant footwear</b>	—	Works on slippery surfaces — Works on humidity environments	— — — — Building construction Civil engineering construction Shipbuilding Slaughterhouse

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			— — — —	Cleaning Food industries Gardening Fishing industry	
<b>Falls from a height</b>	<b>Whole body PPE designed to prevent or arrest falls from height</b>	— — — — — — — — — — — — — — — —	Work on scaffolding Assembly of prefabricated parts Works on masts Roof work Work on vertical or slope surfaces Work in high crane cabs Work in high cabs of warehouse stacking and retrieval equipment Work in high sections of drilling towers Work in shafts and sewers	— — — — — — — — — — — — — — — —	Building construction Civil engineering construction Shipbuilding Infrastructure maintenance
<b>Vibration</b>	<b>Hands Protective Gloves</b>	—	Works with hand-guided tools	— — —	Manufacturing industries Building work Civil Engineering work
<b>Static compression of parts of the body</b>	<b>Knee (leg parts) Kneepads</b>	—	Installation of blocks, tiles and	—	Building construction

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			pavers on the floor	—	Civil engineering construction
	Foot <b>Footwear with toecaps</b>	—	Demolitions	—	Building construction
		—	Load handling	—	Civil engineering construction
				—	Transport and storage
				—	Maintenance
<b>Mechanical injuries (abrasion, perforation, cuts, bites, wounds or stabs)</b>	Eyes and/or face <b>Spectacles, goggles, face shields</b>	—	Works with hand-guided tools	—	Building construction
		—	Welding and forging	—	Civil engineering construction
		—	Grinding and separating work	—	Shipbuilding
		—	Chiselling	—	Mining works
		—	Rock working and processing	—	Energy production
		—	Work on stock removing machines for small chippings	—	Infrastructure maintenance
		—	Drop forging	—	Iron and Steel industries
		—	The removal and breaking up of fragments	—	Metal and Wood industries
		—	Spraying of abrasive substances	—	Stone carving
		—	Use of brush cutter or chainsaw	—	Gardening
				—	Forestry

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<b>Hands Mechanical protective gloves</b>	— — — — — — — — — — — — — —	Works with steel framework Handling of sharp- edged objects, other than machines where there is a danger of the gloves being caught Regular cutting using a hand knife for production and slaughtering Changing the knives of cutting machines Forest works Gardening work	— — — — — — — — — — — — — — —	<b>Building construction Civil engineering construction Shipbuilding Infrastructure maintenance Manufacturing industries Food industry Slaughter Forest industry</b>
<b>Forearms Arm protection</b>	—	Boning and cutting	— —	<b>Food industry Slaughter</b>
<b>Trunk/Abdomen/ Leg Protective apron, gaiters Penetration resistance trousers (cut- resistant trousers)</b>	— —	Regular cutting using a hand knife for production and slaughtering Forest works	— — —	<b>Food industry Slaughter Forest industry</b>
<b>Foot Penetration resistance footwear</b>	— —	Carcase works and road works Demolition	— —	<b>Building construction Civil engineering construction</b>



		—	Formwork's erection and stripping	—	Shipbuilding
		—	Forest works	—	Mining works
		—	Forest works	—	Forest industry
<b>Entanglement and trapping</b>	<b>Whole body Protective clothing for use where there is a risk of entanglement with moving parts</b>	—	Entangle oneself in parts of machines	—	Machine building
		—	Get caught in parts of machines	—	Manufacture of heavy-duty machines
		—	Get caught with garment in parts of machines	—	Engineering
		—	Get swept away	—	Construction
		—		—	Agriculture
<b>PHYSICAL — NOISE</b>					
<b>Noise</b>	<b>Ears Hearing protectors</b>	—	Work with metal presses	—	Metal Industry
		—	Work with pneumatic drills	—	Manufacturing industry
		—	The work of ground staff at airports	—	Building construction
		—	Works with power tools	—	Civil engineering construction
		—	Blasting works	—	Aeronautical industry
		—	Pile-driving work	—	Mining works
		—	Wood and textile working		
<b>PHYSICAL — THERMAL</b>					
<b>Heat and/or fire</b>	<b>Face/Whole head Welding headshields,</b>	—	Work in presence of high	—	Iron and Steel Industry

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<b>helmets/caps against heat or fire, protective hoods against heat and/or flame</b>	—  —	temperatures, radiating heat or fire Work with or in the vicinity of molten substances Work with welding plastics guns	—  —	Metal Industry Maintenance services Manufacturing Industry
Trunk/abdomen/legs <b>Protective apron, gaiters</b>	—  —	Welding and forging Casting	—  —  —	Iron and Steel Industry Metal Industry Maintenance services Manufacturing industry
Hand <b>Protective gloves against heat and/or flame</b>	—  —  —	Welding and forging Work in presence of high temperatures, radiating heat or fire Work with or in the vicinity of molten substances	—  —  —	Iron and Steel Industry Metal Industry Maintenance services Manufacturing industry
Forearms <b>Sleeves</b>	—  —	Welding and forging Work with or in the vicinity of molten substances	—  —  —	Iron and Steel Industry Metal Industry Maintenance services Manufacturing industry

	Foot <b>Footwear against heat and/or flame</b>	—	Work with or in the vicinity of molten substances	— — — —	Iron and Steel Industry Metal Industry Maintenance services Manufacturing industry
	Whole/partial body <b>Protective clothing against heat and/or flame</b>	—	Work in presence of high temperatures, radiating heat or fire	— —	Iron and Steel Industry Metal Industry Forest Industry
<b>Cold</b>	Hand <b>Protective gloves against cold</b> Foot <b>Footwear against cold</b>	— — —	Work in the open air in extreme cold conditions Work in deep-freeze rooms Work with cryogenic liquids	— — — — — —	Building construction Civil engineering construction Shipbuilding Mining works Food Industry Agriculture and fisheries sector
	Whole/partial body including head <b>Protective clothing against cold</b>	— —	Work in the open air in cold weather conditions Work in deep-freeze rooms	— — — — — —	Building construction Civil engineering construction Shipbuilding Mining works Food Industry Agriculture and fisheries sector Transport and storage

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<b>Electric shock (direct or indirect contact)</b>	Whole head <b>Electrically insulating helmets</b> Hands <b>Electrically insulating gloves</b> Foot <b>Electrically insulating footwear</b> Whole body/ Hands/Foot <b>Conductive PPE intended to be worn by skilled persons during live working at a nominal power system voltage up to 800 kV AC and 600 kV DC</b>	—	Live working or close to live parts under electrical tension Work on electrical system	—	Energy production Transmission and distribution of electrical energy Industrial facilities maintenance Building construction Civil engineering construction
<b>Static electricity</b>	Hands <b>Antistatic gloves</b> Foot <b>Antistatic/conductive footwear</b> Whole body <b>Antistatic clothing</b>	—	Handling plastic and rubber Pouring, collecting or loading into a container Work near to highly charged elements such as conveyor belts Handling explosives	—	Manufacturing industry Feed industry Bagging and packing plants Production, storage or transport of explosives
<b>PHYSICAL — RADIATION</b>					
<b>Non-ionizing radiation, including sunlight (other than direct observation)</b>	Head <b>Caps and helmets</b>	—	Work in open air	—	Fishing and agriculture Building construction Civil engineering construction

	Eyes <b>Protective spectacles, goggles and face shields</b>	— Work with radiant heat — Furnace operations — Work with laser — Work in open air — Welding and gas cutting — Glass blowing — Germicidal lamps	— Iron and Steel Industries — Manufacturing industry — Fishing and agriculture
	Whole body (skin) <b>PPE against Natural and artificial UV</b>	— Work in the open air — Electrical welding — Germicidal lamps — Xenon lamps	— Building construction — Civil engineering construction — Shipbuilding — Mining works — Energy production — Infrastructure maintenance — Fishing and agriculture — Forest industry — Gardening — Food industry — Plastic industry — Printing industry
<b>Ionizing radiation</b>	Eyes <b>Protective spectacles/goggles against ionizing radiation</b> Hands <b>Protective gloves against ionizing radiation</b>	— Operating in X-ray facilities — Operating in the area of medical radio diagnosis	— Healthcare — Veterinary care — Radioactive waste plant — Energy production

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	—	Work with radioactive products		
Trunk/abdomen/partial body <b>Protective apron against x-rays /Coat/Vest/Skirt against x-rays</b>	— —	Operating in X-ray facilities Operating in the area of medical radio diagnosis	— — — — —	Healthcare Veterinary care Dental care Urology Surgery Interventional radiology Laboratories
Head <b>Headwear &amp; Caps PPE for protection against e.g. development of brain tumours</b>	—	Medical X-ray work places and facilities	— — — —	Healthcare Veterinary care Dental care Urology Surgery Interventional radiology
Partial body <b>PPE for thyroid protection PPE for gonads protection</b>	— —	Operating in X-ray facilities Operating in the area of medical radio diagnosis	— —	Healthcare Veterinary care
Whole body <b>Protective clothing against ionizing radiation</b>	— —	Operating in the area of medical radio diagnosis Work with radioactive products	— —	Energy production Radioactive waste plant

## II.CHEMICAL RISKS (including nanomaterial)

<b>Risks</b>	<b>Body part affected Type of PPE</b>	<b>Examples of activities where the use of the corresponding</b>	<b>Industry and Sectors</b>
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		type of PPE may be necessary (*)				
<b>CHEMICAL — AEROSOLS</b>						
<b>Solid (dusts, fumes, smokes, fibres, and nano-material)</b>	Respiratory system <b>Respiratory protective devices against particles</b>	—	Demolition	—	Building construction	
		—	Blasting works	—	Civil engineering construction	
		—	Sanding and Polishing of surfaces	—	Shipbuilding works	
		—	Work in presence of asbestos	—	Iron and Steel industries	
		—	Use of materials consisting of/ containing nanoparticles	—	Metal and Wood industries	
		—	Welding	—	Automotive industry	
		—	Chimney sweeper	—	Stone carving	
		—	Work on the lining of furnaces and ladles where there may be dust	—	Pharmaceuticals industry	
		—	Work in the vicinity of blast furnace taps where there may be heavy metal fumes	—	Healthcare services	
		—	Work in the vicinity of the blast furnace charge	—	Preparation of cytostatics	
		Hands	—	Work in presence	—	Building construction

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	<b>Chemical Protective gloves and barrier cream as an additional/ accessory protection</b>	—	of asbestos Use of materials consisting of/ containing nanoparticles	— — —	Civil engineering construction Shipbuilding Industrial facilities maintenance
	<b>Whole body Protective clothing against solid particles</b>	— — — — —	Demolition Work in presence of asbestos Use of materials consisting of/ containing nanoparticles Chimney sweeper Preparation of plant protection products	— — — — —	Building construction Civil engineering construction Shipbuilding Industrial facilities maintenance Agriculture
	<b>Eyes Spectacles/goggles and face shields</b>	— —	Woodworking Road work	— — —	Mining industry Metal and wood industry Civil engineering construction
<b>Liquid (mists and fogs)</b>	<b>Respiratory system Respiratory protective devices against particles</b>	— — —	Surface treatment (e.g. varnishing/ painting, abrasive blasting) Surface cleaning	— — —	Metal Industry Manufacturing Industry Automotive sector
	<b>Hands Chemical protective gloves</b>	— — —	Surface treatment Surface cleaning Work with liquid sprays	— — —	Metal Industry Manufacturing industry Automotive sector



		—	Works with acids and caustic solutions, disinfectants and corrosive cleaning substances	
	Whole body <b>Chemical protective clothing</b>	— —	Surface treatment Surface cleaning	— — — Metal Industry Manufacturing industry Automotive sector
<b>CHEMICAL — LIQUIDS</b>				
<b>Immersion Splashes, sprays and jets</b>	Hands <b>Chemical protective gloves,</b>	— — — — —	Work with liquid sprays Works with acids and caustic solutions, disinfectants and corrosive cleaning products Processing of coating materials Tanning Work in hairdressers and beauty salons	— — — — — Textile and clothing industry Cleaning industry Automobile industry Beauty and hairdressing sectors
	Forearms <b>Chemical protective sleeves</b>	—	Works with acids and caustic solutions, disinfectants and corrosive cleaning products	— — — Cleaning industry Chemical industry Cleaning industry Automobile industry

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	Foot <b>Chemical protective boots</b>	— —	Work with liquid sprays Works with acids and caustic solutions, disinfectants and corrosive cleaning products	— — —	Textile and clothing industry Cleaning industry Automobile industry
	Whole body <b>Chemical protective clothing</b>	— —	Work with liquid sprays Works with acids and caustic solutions, disinfectants and corrosive cleaning products	— — — —	Cleaning industry Chemical industry Cleaning industry Automobile industry Agriculture
<b>CHEMICAL — GASES AND VAPOURS</b>					
<b>Gases and vapours</b>	Respiratory system <b>Respiratory protective devices against gases</b>	— — — — — —	Surface treatment (e.g. varnishing/painting, abrasive blasting) Surface cleaning Work in fermentation and distilling rooms Work inside tanks and digesters Work in containers, restricted areas and	— — — — — —	Metal Industry Automotive sector Manufacturing industry Cleaning industry Alcoholic drinks production Wastewater treatment plants Waste treatment plant Chemical Industry Petrochemical industry

	—	gas-fired industrial furnaces where there may be gas or insufficient oxygen		
	—	Chimney sweeper		
	—	Disinfectants and corrosive cleaning substances		
	—	Work in the vicinity of gas converters and blast furnace gas pipes		
<b>Hands Chemical protective gloves</b>	—	Surface treatment	—	Metal Industry
	—	Surface cleaning	—	Automotive sector
	—	Work in fermentation and distilling rooms	—	Manufacturing industry Alcoholic drinks production
	—	Work inside tanks and digesters	—	Wastewater treatment plants
	—	Work in containers, restricted areas and gas-fired industrial furnaces where there may be gas or insufficient oxygen	—	Waste treatment plant Chemical Industry Petrochemical industry
<b>Whole body Chemical protective clothing</b>	—	Surface treatment	—	Metal Industry
	—	Surface cleaning	—	Automotive sector

		—	Work in fermentation and distilling rooms	—	Manufacturing industry
		—	Work inside tanks and digesters	—	Alcoholic drinks production
		—	Work in containers, restricted areas and gas-fired industrial furnaces where there may be gas or insufficient oxygen	—	Wastewater treatment plants
		—		—	Waste treatment plant
		—		—	Chemical Industry
		—		—	Petrochemical industry
	Eyes	—	Spray painting	—	Automotive sector
	<b>Spectacles, goggles and face shields</b>	—	Woodworking	—	Manufacturing industry
		—	Mining operations	—	Mine industry
				—	Chemical Industry
				—	Petrochemical industry

## III. BIOLOGICAL AGENTS

<b>Risks</b>	<b>Body part affected</b>	<b>Type of PPE</b>	<b>Examples of activities where the use of the corresponding type of PPE may be necessary (*)</b>	<b>Industry and Sectors</b>		
<b>BIOLOGICAL AGENTS (contained in) - AEROSOLS</b>						
<b>Solids and liquids</b>	Respiratory system	<b>Respiratory protective devices against particles</b>	—	Work that involve contact with human body and animal fluids and tissues	—	Healthcare
					—	Veterinary clinics
					—	Clinical analysis laboratories
					—	Research Laboratories
					—	Retirement homes

		—	Work in presence of biological agent	—	Homes assistances Wastewater treatment plants Waste treatment plant Food Industry Biochemical production
	Hands <b>Protective gloves against microorganisms</b> Whole/partial body <b>Protective clothing against biological agents</b> Eyes and/or face <b>Protective spectacles, goggles and face shields</b>	—	Work that involve contact with human body and animal fluids and tissues	—	Healthcare Veterinary clinics Clinical analysis laboratories Research Laboratories Retirement homes
		—	Work in presence of biological agent	—	Homes assistances Wastewater treatment plants Waste treatment plant Food Industry
<b>BIOLOGICAL AGENTS (contained in) - LIQUIDS</b>					
<b>Direct and indirect contact</b>	Hands <b>Protective gloves against microorganisms</b> Whole/partial body <b>Protective clothing against biological agents</b> Eyes and/or face <b>Protective goggles and face shields</b>	—	Work that involve contact with human body and animal fluids and tissues (bites, stings)	—	Healthcare Veterinary clinics Clinical analysis laboratories Research Laboratories Retirement homes Homes assistances
		—	Work in presence of biological agent	—	Wastewater treatment plants Waste treatment plant

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			—	Food Industry
			—	Forest industry
<b>Splashes, sprays and jets</b>	<b>Hands</b> <b>Protective gloves against microorganisms</b>	—	Work that involve contact with human body and animal fluids and tissues	— Healthcare — Veterinary clinics — Clinical analysis laboratories — Research Laboratories — Retirement homes
		—	Work in presence of biological agent	— Homes assistances — Wastewater treatment plants — Waste treatment plant — Food Industry
	<b>Forearms</b> <b>Protective sleeves against microorganisms</b>	—	Work that involve contact with human body and animal fluids and tissues	— Healthcare — Veterinary clinics — Clinical analysis laboratories — Research Laboratories — Retirement homes
		—	Work in presence of biological agent	— Homes assistances — Wastewater treatment plants — Waste treatment plant — Food Industry
	<b>Foot/legs</b> <b>Protective over boots and gaiters</b>	—	Work that involve contact with human body and animal	— Healthcare — Veterinary clinics — Clinical analysis laboratories

		—	fluids and tissues Work in presence of biological agent	— — — — — —	Research Laboratories Retirement homes Homes assistances Wastewater treatment plants Waste treatment plant Food Industry
	<b>Whole body Protective clothing against biological agents</b>	—          —	Work that involve contact with human body and animal fluids and tissues Work in presence of biological agent	— — — — — — — — — — —	Healthcare Veterinary clinics Clinical analysis laboratories Research Laboratories Retirement homes Homes assistances Wastewater treatment plants Waste treatment plant Food Industry
<b>BIOLOGICAL AGENTS (contained in) – MATERIALS, PERSONS, ANIMALS, ETC.</b>					
<b>Direct and indirect contact</b>	Hands <b>Protective gloves against microorganisms</b> Whole/partial body <b>Protective clothing against biological agents</b> Eyes and/or face <b>Protective goggles and face shields</b>	—          —	Work that involve contact with human body and animal fluids and tissues (bites, stings) Work in presence of biological agent	— — — — — — — — — — —	Healthcare Veterinary clinics Clinical analysis laboratories Research Laboratories Retirement homes Homes assistances Wastewater treatment plants

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			—	Waste treatment plant
			—	Food Industry
			—	Forest industry

#### IV. OTHER RISKS

<b>Risks</b>	<b>Body part affected Type of PPE</b>	<b>Examples of activities where the use of the corresponding type of PPE may be necessary (*)</b>	<b>Industry and Sectors</b>
<b>Non-visibility</b>	<b>Whole body PPE for signalling the user's presence visually</b>	<ul style="list-style-type: none"> <li>— Work in proximity of movement of vehicles</li> <li>— Asphalt works and road marking</li> <li>— Railway works</li> <li>— Driving means of transport</li> <li>— Work of ground staff at airport</li> </ul>	<ul style="list-style-type: none"> <li>— Building construction</li> <li>— Civil engineering construction</li> <li>— Shipbuilding</li> <li>— Mining works</li> <li>— Transport services and passengers transports</li> </ul>
<b>Oxygen deficiency</b>	<b>Respiratory system Insulating respiratory protectives devices</b>	<ul style="list-style-type: none"> <li>— Work in confined spaces</li> <li>— Work in fermentation and distilling rooms</li> <li>— Work inside tanks and digesters</li> <li>— Work in containers, restricted areas and gas-fired</li> </ul>	<ul style="list-style-type: none"> <li>— Alcoholic drinks production</li> <li>— Civil engineering construction</li> <li>— Chemical Industry</li> <li>— Petrochemical industry</li> </ul>



		—	industrial furnaces where there may be gas or insufficient oxygen Work in shafts, sewers and other underground areas connected with sewage		
	Respiratory system <b>Diving equipment</b>	—	Underwater works	—	Civil engineering construction
<b>Drowning</b>	Whole body <b>Life jacket</b>	— — —	Work on or near water Work in the sea Work in an airplane	— — — — —	Fishing industry Aeronautical industry Building construction Civil engineering construction Shipbuilding Docks and harbours

- (1) OJ L 393, 30.12.1989, p. 18.
- (2) European Pillar of Social Rights, 2017, [https://ec.europa.eu/commission/sites/beta-political/files/social-summit-european-pillar-social-rights-booklet\\_en.pdf](https://ec.europa.eu/commission/sites/beta-political/files/social-summit-european-pillar-social-rights-booklet_en.pdf)
- (3) SWD(2017) 10 final
- (4) COM(2017) 12
- (5) Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC (OJ L 81, 31.3.2016, p. 51).
- (6) PPE Regulation Guidelines – Guide to application of Regulation (EU) 2016/425 on personal protective equipment, <https://ec.europa.eu/docsroom/documents/29201>
- (7) Advisory Committee for Safety and Health at Work Doc. 1718/2017
- (8) Advisory Committee for Safety and Health at Work Doc. 443/18
- (9) OJ C 369, 17.12.2011, p. 14.
- (10) Council Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work (OJ L 183, 29.6.1989, p. 1).
- (11) In certain circumstances, as a result of the risk assessment, barrier creams could be used together with other PPE with the aim of protecting workers' skin from related risks. Barrier creams are PPE under the scope of Directive 89/656/EEC as this type of equipment can be considered in certain circumstances as “additional or accessory” within the meaning of Article 2 of Directive 89/656/EEC. However, barrier creams are not PPE according to the definition in Article 3(1) of Regulation (EU) 2016/425.