



## Commission follows up on workers' protection from cancer-causing chemicals

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The EU principles of worker protection from carcinogens are laid out in the over-arching [Occupational Safety and Health \(OSH\) Framework Directive 89/391/EEC](#) and those Directives specifically dealing with chemical risks – notably the [Chemical Agents Directive](#) (CAD) and the [Carcinogens and Mutagens Directive](#) (CMD).

Under the OSH framework, risks to the safety and health of workers must be eliminated, or, if total elimination is not possible, reduced to a minimum. Employers must identify and assess risks to workers associated with exposure to specific carcinogens and mutagens at the workplace, and must prevent exposure where risks occur. Where this is technically possible, substitution with a non- or less-hazardous process or chemical agent is required. In cases where such substitution is not possible, chemical carcinogens must, as far as it is technically possible, be manufactured and used in a closed system to prevent workers' exposure. Where this is not possible either, worker exposure must be reduced to as low a level as is technically possible.

The Carcinogens and Mutagens Directive (CMD) sets a number of general provisions to prevent or reduce exposure for all carcinogens and mutagens falling under its scope. In addition to these general minimum requirements, the CMD indicates occupational exposure limit values (OELs) for all those carcinogens or mutagens for which this is possible, as an essential means to protect workers.

Reducing exposure to carcinogens and mutagens at the workplace by setting EU-wide OELs effectively contributes to the prevention of cancer cases, as well as other significant non-cancer health problems caused by these substances. Consequently it improves the quality of life and well-being of workers and their close ones, prolong working lives, contribute to better productivity and competitiveness of the EU, and improve the level playing field for businesses within the EU.

Scientific knowledge about carcinogenic chemicals is constantly evolving and technological progress enables improvements in protection of workers. To ensure that the mechanisms for protecting workers established in the CMD are as effective as possible and that up-to-date preventative measures are in place in all Member States, the Directive needs to be regularly revised. For this reason, the Commission has supported a continuous process of updating the CMD to keep abreast with the new scientific and technical developments, taking account of Social Partner's and Member State's views.

The current proposal is part of this continuous revision exercise, and is the third one since the start of this Commission. Two previous legislative amendments were proposed by the Commission, in May 2016 and [January 2017](#). Together they proposed limit values to 20 carcinogens. The first of these proposals was adopted by the co-legislators as [Directive \(EU\) 2017/2398](#).

### What changes does the Commission propose to the Carcinogens and Mutagens Directive?

As part of this latest amendment to the CMD, five carcinogens of high relevance for the protection of workers have been selected:

- Cadmium and its inorganic compounds;
- Beryllium and inorganic beryllium compounds;
- Arsenic acid and its salts, as well as inorganic arsenic compounds;
- Formaldehyde;
- 4,4'-Methylene-bis(2-chloroaniline) (MOCA).

The first three carcinogens listed above are substance groups which comprise a large number of priority compounds. Clear support for establishing OELs for the substances subject to this initiative has been expressed by key stakeholders during the two phases of the consultation of the social partners and in the opinions of the tripartite Advisory Committee on Safety and Health at Work (ACSH).

**Table 1: Estimated exposed workforce, sectors concerned and health effects for the five carcinogens under consideration**

<b>Carcinogen</b>	<b>Estimated exposed workforce (number of workers)</b>	<b>Examples of sectors concerned</b>	<b>Health effects caused</b>
Cadmium and its inorganic compounds	<b>10 000</b> <i>Range of 2 900 – 300 000 between different estimates</i>	Cadmium production and refining, nickel-cadmium battery manufacture, cadmium pigment manufacture and formulation, cadmium alloy production, mechanical plating, zinc and copper smelting, mining of non-ferrous metal ores, brazing with a silver-cadmium-silver alloy solder, and polyvinylchloride compounding	Lung cancer, bladder, kidney and prostatic cancer  Proteinuria, osteoporosis and respiratory effects
Beryllium and inorganic beryllium compounds	<b>54 000</b> <i>Range of 14 000 – 74 000 between different estimates</i> <i>In addition: 7 000 – 41 000 workers potentially exposed in the construction sector</i>	Foundries, glass sector, laboratories	Lung cancer  Chronic beryllium disease, allergy or asthma symptoms, beryllium respiratory sensitisation, skin sensitisation, cardiovascular, renal, hepatic and haematological effects Lung cancer, cancer in the skin, liver, lungs, bladder and kidney
Arsenic acid and its salts, as well as inorganic arsenic compounds	<b>7 900 –15 300</b> <i>In addition: 18 000-102 000 potentially exposed below the lowest assessed OELs</i>	Copper and zinc production, glass, electronics and chemical sectors	Peripheral neuropathy, cardiovascular effects and immunotoxicity, skin changes and blackfoot disease
Formaldehyde	<b>990 000</b> <i>Range of 990 000 – 2 200 000 between different estimates</i>	Formaldehyde manufacturing, building and construction works, manufacturing of leather and fur, pulp, paper and paper products, textile and wood and wood products, pathology	Nasopharyngeal cancer, leukaemia, tumour induction  Sensory irritation, potential cancer precursor effects

		departments and autopsy rooms	
4,4'-Methylene- bis(2-chloroaniline) (MOCA)	<b>350</b> <i>1 200 workers may potentially be indirectly exposed</i>	Plastics sector	Lung cancer, bladder cancer
Total workforce assessed:	<b>~ 1 070 000</b>		
<i>Based on external study: RPA (2018)</i>			

### What are the benefits of the proposal for workers?

The proposal ensures the same minimum level of protection for all workers across the EU. Introducing these limit values will lead to fewer cases of work-related cancer. At the same time, carcinogenic and mutagenic substances can also cause other important health problems. For example, exposure to beryllium, in addition to lung cancer, also causes incurable chronic beryllium disease. Putting in place effective measures to prevent high exposures to the five substances and groups of substances under consideration would have a positive impact that would be much broader than cancer prevention alone.

Estimates show that this proposal would improve working conditions for over 1 million EU workers and prevent over 22,000 cases of work-related ill health in longer term. There are, however, a number of limitations that lead to an underestimation of the potential health benefits. These include the range of health effects of the substances, the existing availability of epidemiologic evidence, and the difficulties to predict future trends in exposures and production methods.

Assessing the monetary benefits of action against carcinogens and concomitant reduction in ill-health is also challenging. The greatest benefits of this proposal are expected in relation to formaldehyde. The quantified benefits for workers linked to the prevention of ill-health (nasopharyngeal cancer and sensory irritation only) are estimated to range between €1 billion to €5 billion.

What benefits will the proposal bring for businesses?

For businesses, the proposal will reduce costs caused by work-related ill-health and cancer in terms of absenteeism, lost expertise, insurance payments and productivity losses.

The existence of OELs provides clarity. They act as valuable benchmarks for employers enabling them to know exactly the levels above which exposure should not occur. OELs also allow employers to determine the level below which their risk management measures should aim to comply with the obligation to reduce the exposure to as low a level as is technically possible.

In addition, the proposal contributes to a more level playing field for businesses across the EU in the form of EU-wide minimum standards of protection. This is essential when striving for a deeper and fairer single market.

### What benefits will the proposal bring for Member States?

For Member States, the proposal will contribute to avoid productivity losses and mitigate the financial costs of national social security systems, reducing the healthcare costs related to treatment and rehabilitation, and tax revenue losses due to morbidity and mortality.

The existence of EU-level OELs provides clarity regarding the acceptable levels of exposure and supports enforcement authorities in controlling that employers are putting in place the relevant risk management measures. In particular, OELs facilitate the work of inspectors by providing a helpful benchmark for compliance checks.

Furthermore, the existence of an EU OEL removes the need for national public authorities to independently evaluate each carcinogen to set their national OEL, preventing the inefficient repetition of identical tasks across Member States.

### How have the social partners been consulted?

For this proposal, the Commission has conducted a two-stage consultation of the European Social Partners, first on the possible direction of European Union action concerning further revisions of the CMD, and secondly on its possible content. The social partners, workers' and employers' organisations, confirmed that the five carcinogens selected for the third amendment of the Directive are of high relevance for the protection of workers and encouraged the Commission to continue the work to establish EU OELs.

The Commission's preparatory work for the establishment of OELs took into account the input provided by the tripartite Advisory Committee on Safety and Health (ACSH), where workers', employers' organizations and Member States provided their opinion on the limit values proposed in the initiative.

**For more info**

[Press release](#)

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