



## Commission acts to improve protection of workers with new exposure limits for lead and diisocyanates

Brussels, 13 February 2023

Today, the Commission has taken action to further improve the protection of workers from the health risks linked to the exposure to dangerous chemicals: lead and diisocyanates. In the case of lead, a significantly reduced exposure limit will help prevent health issues of workers, for example affecting reproductive functions and foetal development. For diisocyanates, a new exposure limit will prevent cases of asthma and other respiratory diseases.

Concretely, the Commission proposes to amend two Directives: for lead, the [Directive on the protection of workers from the risks related to exposure to carcinogens, mutagens and reprotoxic substances at work](#), and for lead and diisocyanates, the [Directive on the protection of workers from the risks related to chemical agents at work](#).

The proposed changes will also be key to protect workers in the context of advancing the transition to climate neutrality: both lead and diisocyanates are likely to be used, for example, in the production of batteries and in processes to make electric vehicles lighter, in wind turbines or as insulating materials during building renovations.

### Further lowering the exposure limit for lead

Lead can affect sexual function and fertility, and it can harm the development of a foetus or offspring of exposed women. It can also damage the nervous system, the kidneys, the heart and blood of people exposed to it. It is estimated that currently, 100,000 workers in the EU are exposed to lead at work, according to the European Commission's impact assessment.

The EU has had occupational exposure limits in place to protect workers from the negative health effects of lead since 1982. On the basis of the latest scientific evidence, the Commission today proposes:

- **To further lower the occupational exposure limit from 0.15 milligrams per cubic meter (0.15mg/m<sup>3</sup>) to 0.03mg/m<sup>3</sup>**, and
- **To lower the biological limit value from 70 microgram per 100 millilitre of blood (70µg/100ml) to 15µg/100ml.**

While the workforce exposed to lead is predominantly male, female workers may face additional risks as lead can affect pregnant women and the developing foetus. Therefore, the Commission also reiterates that to better protect women, it is paramount to raise awareness among workers of childbearing capacity and put in place specific measures to minimise any possible risks and in addition ensure that the blood lead level in women of childbearing age should not exceed the reference values of the general population not occupationally exposed to lead in the respective Member State. When national reference levels are not available, blood lead levels in women of childbearing age should not exceed the biological limit value of 4.5 µg/100ml.

### Introducing first-ever exposure limits for diisocyanates

Diisocyanates describe various chemicals that are often grouped based on their common properties, and which can cause respiratory diseases like asthma. The Commission's impact assessment estimates that currently, 4.2 million workers in the EU are exposed to diisocyanates. There are currently no limit values for diisocyanates at EU level.

The Commission therefore proposes to introduce, for the first time, limit values to protect workers from exposure to diisocyanates at work. These limit values refer to the nitrogen, carbon, and oxygen group of diisocyanates, responsible for their ill-health effects:

- **An overall occupational exposure limit of 6µg NCO/m<sup>3</sup>** (this stands for the maximum concentration of a substance in the air a worker breathes in a certain reference period, 8 hours) and

- **A short-term exposure limit of 12µg NCO/m<sup>3</sup>** (this stands for a shorter reference period, 15 minutes. It applies when the negative health effects of a substance cannot be adequately controlled with an overall exposure limit, for instance during short but high intensity exposure).

In addition to the limit values, the Commission proposes so-called "notations". Notations are indications added to limit values, which alert employers and workers of possible exposure via routes other than inhalation, for example, through the skin, and of the need to implement protective measures.

### **Next steps**

The Commission's proposal will now be discussed by the European Parliament and the Council. Once adopted, Member States will have two years to transpose the Directive into national law.

### **Background**

Today's proposal is the result of an extensive consultation process, including a two-stage consultation with social partners, and of close collaboration with scientists and representatives of workers, employers, and Member States.

It follows up on the commitments made in the [EU Strategic Framework on health and safety at work 2021-2027](#), where the Commission announced a proposal for limit values for lead and diisocyanates. It also stems from the [fourth revision of the Carcinogens and Mutagens Directive](#) in March 2022, which extended its scope to reprotoxic substances, which affect reproductive functions. This proposal brings lead under the scope of the now Carcinogens, Mutagens and Reprotoxic Substances Directive. The actions will also contribute to implementing the [European Pillar of Social Rights](#).

Lead accounts for around half of all occupational exposures to reprotoxic substances. Approximately 300 cases of ill-health occur annually in the EU due to past exposure to lead. Exposure occurs in the mining and primary processing of lead, and its subsequent use in products such as batteries. In addition, workers can be exposed to lead due to its historical application in renovations, waste collection, recycling, and environmental remediation.

Occupational exposure to diisocyanates accounts for 9% to 15% of all asthma cases in adults of working age. Peak exposure (meaning short duration, high intensity) is a key contributor to developing asthma. This is why in addition to a general occupational exposure limit, a short-term exposure limit is proposed. Work-related exposure to diisocyanates occurs primarily in the manufacturing of polyurethane, which is used for products such as foams, plastics, coatings, varnishes, two-pack paints, and adhesives.

Since there are currently no limit values for diisocyanates, the Commission proposes a transitional period until 31 December 2028 to support businesses with implementation. Until then, the occupational exposure limit will be 10µg NCO/m<sup>3</sup>, and short-term exposure should be limited to 20µg NCO /m<sup>3</sup>.

### **For More Information**

[Proposal for a Directive amending Council Directive 98/24/EC and Directive 2004/37/EC as regards the limit values for lead and its inorganic compounds and diisocyanates](#)

[Impact Assessment accompanying the proposal for a Directive](#)

[EU Strategic Framework on health and safety at work](#)

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Quotes:

"Today, we deliver on our commitment to better protect workers from lead by introducing drastically-reduced exposure limits. In addition, we propose, for the very first time, EU-level protective limit values for diisocyanates which can cause asthma and other respiratory diseases. This proposal will contribute to creating healthier and safer workplaces, and it will protect hundreds of thousands of workers across the EU, which is a key commitment under the European Pillar of Social Rights."  
Nicolas Schmit, Commissioner for Jobs and Social Rights - 13/02/2023

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