



**EUROPEAN COMMISSION**  
DIRECTORATE-GENERAL FOR EMPLOYMENT, SOCIAL AFFAIRS AND INCLUSION  
Working Conditions and Social Dialogue  
Health and Safety at Work Unit, EU-OSHA

## **The Advisory Committee on Safety and Health at Work**

<b>Opinion</b>
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### **Opinion on introducing**

**Work involving exposure to fumes from welding processes containing substances that meet the criteria for CMR category 1A/1B set out in Annex I to the CLP regulation**

**into Annex I of the Directive on the protection of workers from the risks related to exposure to carcinogens, mutagens or reprotoxic substances at work (2004/37/EC)**

**Doc. 006/23**

**Adopted on 22/09/2023**

## **Welding Fumes**

This Opinion is one of a series of chemical specific Opinions adopted by the ACSH in support of the forthcoming Commission proposal on amending the Directive on the protection of workers from the risks related to exposure to carcinogens, mutagens or reprotoxic substances at work (2004/37/EC).

In the meetings of the Working Party of Chemicals on 11<sup>th</sup> - 12<sup>th</sup> May and 05<sup>th</sup> - 06<sup>th</sup> September, in three technical meetings with the consultant and in one technical exchange meeting on 24<sup>th</sup> August 2023 welding fumes have been discussed taking into account the RAC scoping study and the external study on the socioeconomic and environmental impacts.

The three Interest Groups recognise that the exposure of workers to welding fumes in the European Union remains a concern. They agree that this issue should be tackled at the EU level.

The three Interests Groups agreed the following points concerning the inclusion of welding fumes into Annex I:

- There is a need for an annex I entry regarding welding fumes.
- There is a need to develop a guidance to specify in more detail what is meant with the Annex I entry.
- Further measures to reduce health effects of exposure to particulates coming from welding fumes or other sources is needed. This includes specifically - but not exclusively - the establishment of a general dust limit under the CAD.
- All Interests Groups agree that the welding fume entry in annex I should be complemented with a reminder to substance specific BOELVs in annex III. These limit values need to be complied with anyway and most of the relevant hazardous substances for welding processes are already listed there (or are on the way to be listed).

Taking into consideration that:

- Welding fumes are formed when metals (base and/or filler) are heated above their boiling point (vapourised) and their vapours rapidly condense into very fine particles (solid particulates or dust) (ECHA, 2022). The particulate matter (dust) in welding fume is in the scope of this entry. Welding gases which are either produced during welding or used as shielding gases during welding are excluded.
- Although welding fumes containing particulate CMR substances do already fall within the scope of the CMRD and many of those CMRs are already included in Annex III, it is likely to assume that some stakeholders (with decreasing company size an increasing lack of awareness can be assumed) are not aware that their welding process may contain these CMRs.
- Therefore, inclusion into Annex I might indicate to stakeholders that more needs to be done to ensure that the risk management measures (RMM) are in place and to bring clarity about employer's duties on measures to be taken.
- To foster the use of welding methodologies with less emissions of CMR substances and to prevent the use of overprotective measure where they are not needed, the entry has to be phrased in a way that it is clear that welding processes as such do not automatically fall into the scope of the CMRD as they may not be associated with the release of carcinogenic particles.
- Emission rates from welding procedures differ from very low to very high. A single entry into Annex I of CMRD for welding fumes might suggest that all welding processes that release carcinogenic particles have an equal exposure potential. This could, in consequence, e.g. lead to the introduction of disproportionate use of personal protection equipment. In order to avoid this as well as other potential misunderstandings and to further clarify the scope and intention of the annex I entry additional guidance is needed.

- The options to either introduce a general dust metric or a general OEL for dusts specific to welding fumes as a supplementing measure have been assessed on a qualitative level only. Nevertheless, the heterogeneous character of welding fumes does not allow to establish a common OEL for all welding processes. Introducing a general dust metric on the other hand is a task dedicated to the CAD and should be tackled there.

The ACSH strongly recommends the Commission to adopt as soon as possible the below new entry into Annex I under Directive 2004/37/EC:

- Work involving exposure to fumes from welding processes containing substances that meet the criteria for CMR category 1A/1B set out in Annex I to the CLP regulation.<sup>1</sup>

The ACSH strongly recommends developing a guidance to specify in more detail what is meant with the entry. A period of at least 2 years for the development of that guidance should be foreseen to ensure a qualified and user-friendly product. Responsibility for that guidance shall be at DG EMPL with support of the expertise from the WPC (e.g. by continuing the steering group on welding fumes).

The ACSH encourages the Commission to clarify within Annex I or in the proposed entry for welding fumes the fact that currently Annex I contains only a list of carcinogenic substances, mixtures and processes and that reprotoxic substances, mixtures and processes need to be included in order to be consistent with the proposed welding fumes entry. It should also be taken into account that there is a need to distinguish between the requirements applying to carcinogens versus those for reprotoxicants.

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<sup>1</sup> The limit values listed in annex III of this directive must be respected if a given welding process is related to an exposure to CMR substances. Most of the relevant hazardous substances for welding processes are already listed there (or are on the way to be listed).