



**EUROPEAN COMMISSION**  
DG Employment, Social Affairs and Inclusion  
Employment and Social Legislation, Social Dialogue  
**Health and Safety**

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

<b>Opinion</b>
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**Opinion on an EU Binding Occupational Exposure Limit Value (BOEL) for  
Benzene  
under the Carcinogens and Mutagens Directive 2004/37/EC.**

**Doc. 105619**

**Adopted on 04/06/2019**

## **Benzene**

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 Carcinogens and Mutagens Directive (CMD) 2004/37/EC.

In the meetings of the Working Party of Chemicals on 19<sup>th</sup> – 20<sup>th</sup> March 2019 and 29<sup>th</sup> – 30<sup>th</sup> April 2019, the adopted RAC Opinion ECHA/RAC/ O-000000-1412-86-187/F<sup>1</sup> of March 2018 was discussed.

The three Interests Groups agreed the following approach concerning limit values for benzene:

Two years after entry into force of the Directive, a limit value of 0.5 ppm will apply. Four years after entry into force of the Directive, a limit value of 0.2 ppm will apply.

At the latest by January 2028, the ACSH advises that the Commission should start an assessment on the feasibility of a further reduction of the OEL, taking into account the RAC opinion of 2018 and any new relevant information. By 2030, the ACSH advises that the Commission should propose, where appropriate, necessary amendments and modifications related to that substance.

All three Interest Groups agree that the steel foundries sector faces particular difficulties for complying with the proposed OELs. In this sector, and possibly in other sectors, there may be a need for using respiratory protective equipment (RPE) to ensure that the workers are appropriately protected.

The three Interest Groups also agreed on the usefulness of biomonitoring as proposed by RAC but note that, at present, BLVs are not proposed under the CMD. The three interest groups suggest that this BLV is taken into consideration when developing the guidance on the practical use of biomonitoring.

The ACSH strongly recommends the Commission to adopt as soon as possible a revised BOEL for this substance under Directive 2004/37/EC.

The entries in the Directive should be:

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<sup>1</sup> [https://echa.europa.eu/documents/10162/13641/benzene\\_opinion\\_en.pdf/4fec9aac-9ed5-2aae-7b70-5226705358c7](https://echa.europa.eu/documents/10162/13641/benzene_opinion_en.pdf/4fec9aac-9ed5-2aae-7b70-5226705358c7)

EC No	CAS No	NAME OF THE CHEMICAL AGENT	LIMIT VALUES				Notation	Transitional measures
			8 hours		Short-term			
			mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm		
200-753-7	71-43-2	Benzene	0.66	0.2	-	-	skin	This value shall apply from four years after entry into force of the directive. From two years up to four years after entry into force a limit value of 0.5ppm (1.65 mg/m <sup>3</sup> ) shall apply.

**Specific comments of the Government Interest Group (GIG):**

None.

**Specific comments of the Employers Interest Group (EIG):**

The EIG wishes to express its concern regarding the foundry sector, which is affected by most of the recent amendments to the CMD (crystalline silica, arsenic acid and its compounds, cadmium and its compounds, chromium VI compounds and nickel compounds, as well as benzene). For most of these substances, substitution is not possible and, therefore, a wide range of risk management measures must be applied, including the redesign of some facilities and processes. This can jeopardize the continuation of the activity of some companies, because in this sector there are a large number of small companies with few resources. The sector also faces strong competition with companies based in third countries with lower OSH requirements. Accordingly, regarding benzene the impact assessment recognizes that the foundry sector is most vulnerable.

Benzene exposures in foundries are to a great extent occurring due to the need to use organic binders in the core making and moulding processes. For iron and steel casting purposes, organic binders must be used due to high casting temperatures (> 1,200 °C). A significant technological change is not in sight.

The EIG suggests that the transition period to comply with a BOELV of 0.2 ppm for the foundry sector should be extended by 3 years, in order to allow this sector and especially SMEs to make the necessary investments to comply with this BOELV.

**Specific comments of the Workers Interest Group (WIG):**

The WIG is of the opinion that the agreed OELs for benzene should be reduced further to set a binding OEL of 0.05 ppm in Annex III CMD at the latest by January 2030. This is the exposure level recommended by RAC in 2018 under which no adverse effects are expected on exposed workers. Based on the assumption that CMD4 will probably enter into force at the latest early 2021, this extremely long period conceded by WIG to achieve a unanimous opinion with the other Interest Groups should give the different sectors of benzene industry the necessary time to put in place the appropriate risk management measures to comply with this threshold level.

In the meantime, it is the understanding of the WIG that, in accordance with Article 5 of CMD, the exposure minimisation obligation must be applied in all sectors of industry where this is technically possible regardless of costs.

While recognizing that complying with a limit value of 0.2 ppm for benzene is challenging for some companies in the sector of steel foundries, the WIG would like to point out that, in this particular sector of industry, the obligation to comply with other existing OELs in CMD Annex III (Respirable crystalline silica, Chromium VI, cadmium compounds) will make it possible to comply with the agreed OELs for benzene due to risk management measures already in place.

The WIG would like also to emphasize that, according to RAC opinion (2018), well established methods are available to detect benzene in the air at concentrations well below 0.01 ppm and down

to 0.0006 ppm. Thus, at the agreed OELs in this opinion and at the OEL expected by WIG at the latest in January 2030 no measurement difficulties are foreseen.