Association Européenne des Institutions Paritaires

European Association of Paritarian Institutions

AEIP Position Paper on revision of the 6th revision of the Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens, mutagens and reprotoxic substances at work (2025)

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The European Association of Paritarian Institutions (AEIP) welcomes the opportunity to respond to the European Commission's Call for Evidence on the proposal to amend Directive 2004/37/EC concerning carcinogens, mutagens and reprotoxic substances at work. AEIP represents non-profit social protection institutions jointly managed by employers and trade unions through collective agreements. Our members operate in 13 European countries, covering over 118 million people, and provide occupational pensions, healthcare, vocational training, unemployment protection, and schemes directly linked to the construction sector, such as paid leave and training funds.

Given AEIP's close link to the construction sector through paritarian holiday schemes and training institutions, the revision of the CMRD is of high importance. In particular, the recognition **of welding fumes, polycyclic aromatic hydrocarbons (PAHs), and cobalt compounds** is highly relevant for construction activities. These exposures are common in construction worksites and directly affect the health and safety of workers represented by our members.

AEIP's Position

- AEIP supports the objective of the revision: to strengthen prevention of occupational cancers and related diseases, which remain the leading cause of work-related deaths in the EU.
- At the same time, AEIP believes that protecting workers from carcinogenic exposures must go hand in hand with measures that allow companies, particularly SMEs, to adapt without undermining their capacity to generate employment and economic growth.
- To achieve this balance, AEIP encourages the adoption of gradual implementation timelines and transitional measures, giving SMEs sufficient time to comply with new standards while ensuring that worker protection begins immediately through affordable and practical measures.
- AEIP also calls for support mechanisms such as targeted funding, tax incentives, and training initiatives, so that SMEs can invest in protective technologies and workforce upskilling without disproportionate financial strain.
- Paritarian institutions play a vital role in this balanced approach. By providing training, awareness-raising, and worker protection schemes, they help ensure compliance while supporting the competitiveness of SMEs. Their role should therefore be recognised in implementing the revised Directive.

Welding fumes

Welding fumes consist of a complex mixture of metallic oxides, silicates, and fluorides formed when metals are heated above their boiling point and their vapours condense into very fine, solid particles. Depending on the materials being welded, the composition of fumes may include iron, manganese, chromium, nickel, and other hazardous elements. In 2018, the International Agency for Research on Cancer (IARC) classified welding fumes as carcinogenic to humans, associating exposure with lung cancer and potentially kidney cancer[1]. Beyond carcinogenic risks, welding fumes are known to cause acute and

[1]https://publications.iarc.who.int/_publications/media/download/4890/8dea8d7fcfc96b300786a8718b69e44475274beb.pdf

chronic respiratory problems, including metal fume fever, bronchitis, and reduced lung function. Chronic exposure may also contribute to cardiovascular diseases[2].

Relevance for construction

Welding is an indispensable process in construction. It is widely used in:

- Reinforcement of steel structures (beams, columns, and frameworks).
- Assembly of pipelines and metal ducts.
- Repair and maintenance of machinery and equipment on construction sites.
- Prefabricated metal components for bridges, tunnels, and large infrastructure.

Unlike controlled industrial environments, construction welding often occurs in **open-air or semi-confined spaces** where fume extraction and local exhaust ventilation may be difficult to install. This increases the likelihood of worker exposure. Additionally, construction sites typically employ subcontractors and small firms, making consistent enforcement of protective standards more challenging. Given that SMEs account for most construction enterprises, preventive measures must be feasible and affordable for them. While larger firms may already have comprehensive occupational health and safety management systems in place, micro and small firms often rely on basic protective measures that may not suffice for substances as hazardous as welding fumes.

AEIP's position on inclusion

AEIP supports the inclusion of welding fumes in Annex I of the CMRD. This step formally recognises welding fumes as carcinogenic and requires employers to treat them as such during risk assessments and preventive planning. For the construction sector, this clarity is highly valuable: it removes any ambiguity about the seriousness of the hazard and aligns EU rules with the latest scientific evidence.

At the same time, AEIP stresses that inclusion in Annex I must be accompanied by clear **implementation guidance** adapted to construction realities. While it is important to set ambitious standards to protect workers, measures must also be realistic for SMEs that dominate the sector. Without adequate support, there is a risk that compliance will remain uneven across Member States, undermining both worker protection and fair competition.

Polycyclic Aromatic Hydrocarbons (PAHs)

PAHs are a group of chemical substances formed mainly during the incomplete combustion of organic matter such as coal, oil, gas, wood, or other carbon-based materials. More than 100 different PAHs exist, but several have been classified as carcinogenic, mutagenic, or reprotoxic. Benzo[a]pyrene (BaP), in particular, is widely used as a marker for assessing PAH exposure and has long been recognised as a carcinogen[3]. Exposure to PAHs has been linked primarily to lung, skin, and bladder cancers. In addition,

[2] https://www.tandfonline.com/doi/abs/10.1080/713611032
[3] https://pmc.ncbi.nlm.nih.gov/articles/PMC9181839/

they can cause reproductive harm and developmental toxicity[4]. Workers exposed to PAHs may also suffer non-cancer health effects such as skin irritation and respiratory problems.

Relevance for construction

While PAH exposure is most pronounced in industrial sectors such as aluminium production, iron and steel foundries, and coking plants, the construction sector is not exempt from risk. In construction, the most relevant pathways for PAH exposure include:

- **Road paving and roofing**: Asphalt and bitumen used in road surfacing and roofing can emit PAHs, especially when heated during application. Workers engaged in paving, roofing, or waterproofing activities are often exposed to fumes.
- **Tar-based products**: Although many tar-based materials have been phased out in Europe, they may still be present in renovation and demolition projects, especially in older buildings. Workers handling these materials face potential exposure when cutting, removing, or repairing tar-coated structures.
- **Diesel exhaust on worksites**: Construction sites often host heavy machinery and generators running on diesel fuel, which emit PAHs as part of exhaust fumes. While this falls partly under the remit of the Chemical Agents Directive, it overlaps with PAH exposure risks.

In construction, exposure tends to be **episodic and variable**, depending on the type of project, season, and materials used. For example, asphalt paving is concentrated in warmer months, while roofing work may involve intense but short-duration exposures. This variability complicates risk assessment and prevention.

AEIP's position on inclusion

AEIP supports the inclusion of PAHs in the CMRD with binding occupational exposure limits, as this provides clarity and harmonisation across the EU. Construction workers, especially those involved in road and roofing works, deserve the same level of protection as those in heavy industry. The inclusion of PAHs acknowledges the significant cancer risks even at relatively low levels of exposure.

At the same time, AEIP notes that construction differs from heavy industry in several respects: worksites are temporary, working conditions can be unpredictable, and exposure is often combined with other risks such as heat stress and outdoor weather conditions. These factors make it essential that implementation guidelines consider the specificities of the construction sector rather than applying a one-size-fits-all model based on industrial settings.

Cobalt and inorganic cobalt compounds

Cobalt is a naturally occurring element widely used in modern industry. It is essential in the production of

[4] https://www.sciencedirect.com/science/article/abs/pii/S0160412013001633

alloys, pigments, batteries, and catalysts. Cobalt and its inorganic compounds are, however, increasingly recognised for their harmful effects on human health. The European Chemicals Agency's (ECHA) Risk Assessment Committee has classified cobalt as a carcinogen and respiratory sensitiser. Long-term exposure can lead to lung cancer, asthma, hard metal lung disease, and other respiratory conditions. Skin contact can also cause dermatitis and allergic reactions[5].

As Europe accelerates its transition to green technologies, demand for cobalt is rising sharply, particularly due to its role in rechargeable batteries and renewable energy technologies. This trend increases the likelihood that cobalt exposure will expand across multiple sectors, including construction.

Relevance for construction

In the construction sector, cobalt exposure arises primarily through:

- **Cement and concrete products**: Cobalt can be present as a trace element in some raw materials and additives used in cement. Construction workers handling cement may inhale dust containing cobalt.
- **Pigments and paints**: Cobalt-based pigments are used to provide vibrant colours (notably blues and greens) in paints, ceramics, and glass. While their use has declined in some areas, cobalt pigments may still be found in specialist construction applications.
- **Hard metals and tools**: Cobalt is a component of hard metal alloys used in cutting, grinding, and drilling tools common on construction sites. Workers may be exposed during tool production, sharpening, or when dust from tools is released during use.
- **Batteries and energy storage systems**: With the increasing use of electric tools, machinery, and site storage systems powered by lithium-ion batteries, cobalt exposure risks may arise in the handling, repair, or disposal of these products.

For construction workers, cobalt exposure is typically **low-level but widespread**. Unlike welding fumes or PAHs, which are concentrated in specific activities, cobalt can be present in various materials used daily. This makes risk management more diffuse and requires systematic attention.

AEIP's position on inclusion

AEIP supports the inclusion of cobalt and inorganic cobalt compounds in the CMRD with binding exposure limits. Construction workers must not be overlooked simply because exposures are often incidental or diffuse. Even low-level exposure, if chronic, can have serious health consequences. By setting clear EU-wide occupational exposure limits, the Directive will help reduce disparities across Member States, where current national limits vary greatly, from 10 to 500 µg/m³, with some countries having none at all[6].

[5] https://www.tandfonline.com/doi/full/10.3109/10408444.2013.779633
[6] https://eur-lex.europa.eu/resource.html?format=PDF&uri=cellar%3Ab0cf94f6-63e5-11f0-bf4e-01aa75ed71a1.0001.02%2FDOC_1

For construction, inclusion in the CMRD provides clarity and an incentive to implement better protective measures, particularly in cement handling, paint application, and use of cobalt-containing tools. However, AEIP stresses the importance of proportionate measures that SMEs can realistically adopt, as the construction sector is highly fragmented.

Recommendations

AEIP proposes a set of recommendations to strengthen worker protection while ensuring proportional implementation for SMEs in the construction sector.

1. **Sector-specific guidance**

The European Commission should develop practical, sector-tailored guidance. For welding, this should highlight mobile fume extraction, improved natural ventilation, and effective use of Personal Protective Equipment. For asphalt and roofing, guidance should focus on safe handling of bitumen, controlled heating, and avoidance of overheating. For cement and pigments, explicit recognition of cobalt risks is needed, with recommendations on dust suppression, protective clothing, and skin protection. Clear instructions on appropriate respirators and protective clothing, adapted to outdoor and seasonal work, should also be included.

2. **Training and awareness**

Training modules, ideally delivered through paritarian training funds, should integrate welding safety, PAH exposure, and cobalt risks into apprenticeships and continuous training. These should highlight not only acute symptoms such as eye, skin and respiratory irritation but also long-term risks including cancer, asthma, dermatitis and reproductive harm. Campaigns should target both workers and site managers, emphasising the importance of preventive planning, such as material substitution, job rotation to limit exposure, and scheduling high-risk tasks in conditions that maximise ventilation. Paritarian funds have an important role in ensuring widespread adoption of new regulation through sector-specific teaching materials, practical workshops and digital learning tools.

3. **Monitoring and enforcement**

Regular exposure monitoring is essential across welding, asphalt, roofing, and cement worksites. SMEs should be supported through pooled monitoring schemes managed by paritarian institutions. This could include, for example, providing access to portable exposure monitoring equipment, such as handheld aerosol and dust monitors, portable air sampling pumps, and multi-gas detectors, at affordable cost. Labour inspectorates must be adequately staffed and trained to enforce compliance in the fragmented construction sector. Formal recognition of paritarian institutions as partners in both monitoring and awareness campaigns would strengthen enforcement while ensuring sector-specific expertise is embedded in oversight.

4. Support for SMEs

SMEs often face difficulty financing engineering controls and protective technologies. EU and national programmes should provide direct grants, low-interest loans and tax incentives to support investments in fume extraction, enclosed asphalt handling systems, and protective monitoring equipment. Sectoral pooling schemes should ensure collective access to expensive devices, while subsidies should lower barriers to adopting safer substitutes and Personal Protective Equipment.

5. Substitution and innovation

EU research and innovation programmes should prioritise the development of safer, low-emission alternatives to PAH-containing products and cobalt-based pigments. Uptake of substitutes should be incentivised through financial aid and preferential procurement policies, especially for SMEs. Collaboration with industry and paritarian funds will help pilot innovative solutions and speed up deployment.

6. Transitional arrangements

Exposure limits should be introduced with realistic transition periods, phased according to sector capacity. During these periods, immediate measures such as awareness-raising, targeted training, and provision of affordable Personal Protective Equipment must be enforced to reduce risks before structural changes are fully in place. Binding roadmaps should set clear milestones to ensure gradual but steady progress, balancing the urgency of worker protection with SMEs' financial and organisational constraints.