Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

amending Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work

(Text with EEA relevance)

{SWD(2016) 152 final}
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EXPLANATORY MEMORANDUM

1. CONTEXT OF THE PROPOSAL

• Reasons for and objectives of the proposal

This proposal aims to improve workers’ health protection by reducing occupational exposure to carcinogenic chemical agents, to increase the effectiveness of the EU legislation in this area and to provide more clarity and a better level playing field for economic operators. It is among the priority actions identified in the Commission Work Programme for 2016. With this initiative the Commission delivers on its commitment to improve the efficiency and effectiveness of an EU framework for protecting workers. The intention is also to continue this important work and to conduct further impact assessments with a view to propose limit values for additional carcinogens.

Estimates of the recent and future burden of occupational diseases indicate that work-related cancer is a problem and will remain so in the future as a result of exposure of workers to carcinogens. Cancer is the first cause of work-related deaths in the EU. Annually, 53% of occupational deaths are attributed to cancer, compared with 28% for circulatory diseases and 6% for respiratory diseases.¹

The Commission proposes to revise or to introduce exposure limit values for 13 chemical agents. According to the impact assessment, this is estimated to save around 100,000 lives by 2069. The limit values are proposed to be introduced in Directive 2004/37/EC of the European Parliament and of the Council on the protection of workers from the risks related to exposure to carcinogens or mutagens at work (‘the Directive’).² In accordance with Article 16 of the Directive, the Council shall set such limit values on the basis of the available information, including scientific and technical data, in respect of all those carcinogens or mutagens for which this is possible.

The provisions of the Directive apply to any chemical agent that meets the criteria for classification as a category 1A or 1B carcinogen set out in Annex I to Regulation (EC) No 1272/2008 (CLP)³. This Regulation lists ‘harmonised’ (mandatory) classifications for 1017 chemical substances as Category 1 carcinogens (‘known or presumed human carcinogens’) on the basis of epidemiological and/or animal data.⁴ Another important classification process, by the International Agency for Research on Cancer, has identified nearly 500 agents that are carcinogenic for humans (Group 1; 118 agents), probably carcinogenic to humans (Group 2A; 75) or possibly carcinogenic to humans (Group 2B; 288).⁵

⁴ According to that Regulation, 1017 chemical agents (and groups of chemical agents) have received mandatory ‘harmonised classification’ as ‘category 1’ carcinogens, attracting the label hazard statement ‘may cause cancer’.
⁵ Monographs on the evaluation of carcinogenic risk to humans, International Agency for Research on Cancer, WHO.
The provisions of the Directive also apply to any substance, mixture or process referred to in Annex I to that Directive, as well as to any substance or mixture released by a process referred to in that Annex. Annex I to the Directive currently includes a list of identified processes and process-generated substances. The aim is to clarify for workers, employers, and enforcers whether a given chemical agent or process, if it has not otherwise been classified according to Regulation (EC) No 1272/2008, is in the scope of the Directive. Currently, Annex I has five entries.

The Directive sets a number of general minimum requirements to eliminate or reduce exposure for all carcinogens and mutagens falling under its scope. Employers must identify and assess risks to workers associated with exposure to specific carcinogens (and mutagens), and must prevent exposure where risks occur. Substitution to a non or less-hazardous process or chemical agent is required where this is technically possible. Where substitution is not technically possible chemical carcinogens must, as far as it is technically possible, be manufactured and used in a closed system to prevent exposure. Where this is not technically possible, worker exposure must be reduced to as low a level as is technically possible. This is the minimisation obligation under Article 5(2) and Article 5(3) of the Directive.

In addition to these general minimum requirements, the Directive clearly indicates that the setting of occupational exposure limit values for the inhalation route of exposure for particular carcinogens and mutagens was an integral part of the mechanism for protecting workers. Those values still need to be set for the chemical agents for which no such values exist and be revised whenever this becomes possible in the light of more recent scientific data. Concrete exposure limit values for specific chemical agents are set in Annex III to the Directive. Currently, Annex III has three entries.

On this basis, it is proposed to take three specific measures:

a. Include in Annex I to the Directive work involving exposure to respirable crystalline silica dust generated by a work process and establish a corresponding limit value in Annex III.

The International Agency for Research on Cancer stated in Monograph 100C, based on recent scientific evidence, that ‘crystalline silica in the form of quartz or cristobalite dust’ is carcinogenic to humans (Group 1). The Scientific Committee on Occupational Exposure Limits (SCOEL) evaluated the health effects of crystalline silica (respirable dust) on workers at work. The limit value to be introduced in Annex III proposed in this initiative and agreed by the Advisory Committee on Safety and Health at work (ACSH) reflects socio-economic feasibility factors, while maintaining the aim of ensuring the protection of workers' health.

Crystalline silica placed on the market is subject to the classification obligation under Regulation (EC) No 1272/2008, while crystalline silica dust generated by a work process is not placed on the market and therefore is not classified in accordance with that Regulation. However, the Directive makes provisions for the inclusion in Annex I of substances or mixtures released by a process referred to in that Annex which, although not subject to the

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6 Article 1 (1) and recital 13 of the Directive.
7 Recital 13 of the Directive.
classification obligation in accordance with the said Regulation, meet the criteria for classification as a carcinogen. Respirable crystalline silica dust falls within this category.

b. Establish in Annex III limit values for further 10 additional carcinogens.

Available scientific evidence confirms the need to complete Annex III with limit values for 10 additional carcinogens. SCOEL submitted recommendations for all but two of these agents, (o-toluidine and 2-nitropropane). For these, the Commission principally referred to scientific information available in the public domain, including to conclusions of national scientific committees that set occupational exposure limit values. The ACSH was consulted on all aspects of this proposal, in accordance with Article 2 (2) (f) of the Council Decision of 22 July 2003. With regard to the values proposed, socio-economic feasibility factors have been taken into account further to the consultation of the ACSH.

c. Revise the existing limit values for hardwood dusts and vinyl chloride monomer in the light of available scientific data.

For two of the three existing limit values established in Annex III to the Directive, namely on work involving exposure to hardwood dust and vinyl chloride monomer, SCOEL adopted revised recommendations, in 2003 and 2004 respectively. These recommendations indicated a need to consider revising existing limit values for hardwood dusts and vinyl chloride monomer, which were estimated to be too high to properly protect workers. It is therefore appropriate to revise the current limit values for hardwood dusts and vinyl chloride monomer in the light of more recent scientific data.

• Consistency with existing policy provisions in the policy area

Ensuring a safe and healthy work environment for over 217 million workers in the EU is a strategic goal for the Commission according to its recent Communication on the EU Strategic Framework on Health and Safety at Work 2014 – 2020 (setting out an occupational health and safety strategy). One of the main challenges identified in the strategy is to improve the prevention of work-related diseases by tackling existing, new and emerging risks.

This initiative fits within the Commission's priority for a deeper and fairer single market, in particular its social dimension. It is in line with Commission’s work to establish a fair and truly pan-European labour market that provides workers with decent protection and sustainable jobs. This includes occupational health and safety protection, social protection, and rights connected to the employment contract.

Framework Directive 89/391/EEC on health and safety at work and Directive 98/24/EC on risks related to chemical agents at work apply as general law without prejudice to more stringent and/or specific provisions contained in the Directive.

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9 Council Decision of 22 July 2003 setting up an Advisory Committee on Safety and Health at Work, OJ C 218, 13/09/2003, p. 0001 - 0004
11 President Juncker’s State of the Union address in the European Parliament on 9 September 2015.
The social partners, representing 18 European industry sectors signed in 2006 a European Multi-Sectoral Social Dialogue Agreement on Workers' Health Protection through the Good handling and Use of Crystalline Silica and its products (NEPSi). It is an autonomous agreement, concluded in accordance with Article 155(1) of the Treaty on the Functioning of the European Union (TFEU) and implemented by the social partners in accordance with Article 155 (2) TFEU. This agreement complements the current proposal as it provides guidance for, and stimulates preventive measures by, employers in reducing exposure. However, as it is not transformed into EU law and does not cover the construction sector where the predominant exposure occurs, it cannot replace a binding exposure limit set in the Directive.

• **Consistency with other Union policies**

Improving working conditions and preventing workers from suffering serious accidents or occupational diseases and promoting workers’ health throughout their working life, is a key principle in line with the ambition for a European social triple A rating set by President Juncker in his political guidelines. It also has a positive impact on productivity and competitiveness and is essential to promote longer working lives in line with the Europe 2020 strategy’s objectives for smart, sustainable and inclusive growth.  

Of the 13 chemical agents considered in this proposal, three have been added to the candidate list of identified ‘substances of very high concern’ (SVHCs) established under Article 59(1) of Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (‘REACH’): hydrazine, o-toluidine, and refractory ceramic fibres. Refractory ceramic fibres have, further, been recommended by the European Chemical Agency for inclusion in Annex XIV to REACH. Certain chromium (VI) compounds have been identified as SVHCs and added to the candidate list and also, subsequent to the Agency’s recommendation, have been added to Annex XIV to REACH.

The Directive and REACH are legally complementary. The Framework Directive 89/391/EEC, which applies as general law to the area covered by the Directive, provides that it applies without prejudice to existing or future national and EU provisions which are more favourable to protection of the health and safety of workers at work. REACH in turn states that it applies without prejudice to worker protection legislation, including the Directive.

In the context of the complementary operation of the Directive and REACH it makes sense to propose limit values under the Directive for the following reasons:

– hardwood dust and respirable crystalline silica, which are process generated in the workplace, are outside the scope of REACH;

– limit values are an important part of the Directive and of the wider occupational safety and health approach to managing chemical risks. REACH, on the other hand, is not intended to set occupational exposure limit values;

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14 Currently, the Commission is finalising its report on the evaluation of NEPSi.
the Directive covers every use of a chemical agent at the workplace through its entire lifecycle, and covers worker exposure to carcinogenic agents released by any work activity, whether produced intentionally or not, and whether available on the market or not;

REACH places the onus of risk assessment on the supply chain, and is ‘chemical agent specific’. The risk assessment performed by the employers under the Directive 2004/37/EC is workplace-related and process-specific and should also take into account aggregated exposure of workers to all carcinogens present at the workplace. From the point of view of preventing exposure to carcinogens, the Directive offers an holistic approach to workplace risks.

2. LEGAL BASIS, SUBSIDIARITY AND PROPORTIONALITY

• Legal basis

Article 153 (2)(b) of the TFEU provides that the European Parliament and the Council ‘may adopt, in the fields referred to in paragraph 1(a) to (i) [of Article of the 153 TFEU], by means of directives, minimum requirements for gradual implementation, having regard to the conditions and technical rules obtaining in each of the Member States. Such directives shall avoid imposing administrative, financial and legal constraints in a way which would hold back the creation and development of small and medium-sized undertakings’. Article 153(1)(a) of the TFEU states that the Union shall support and complement the activities of the Member States in the field of ‘improvement in particular of the working environment to protect workers’ health and safety’.

Directive 2004/37/EC was adopted on the basis of Article 153(2)(b) with the aim to improve workers’ health and safety. On that basis, Article 16 of Directive 2004/37/EC provides for the adoption of limit values in accordance with the procedure laid down in Article 153(2) of the TFEU in respect of all those carcinogens or mutagens for which this is possible.

The objective of the present proposal is to strengthen the level of worker health protection in line with Article 153(1)(a) of the TFEU, by including in Annex I to the Directive 2004/37/EC work involving exposure to respirable crystalline silica dust (respirable fraction) generated by a work process. This is achieved through the establishment of additional minimum requirements for workers’ health protection in the form of limit values in Annex III to the Directive, and the revision of the current limit values in Annex III for two carcinogens in the light of more recent scientific data. Article 153(2)(b) of the TFEU therefore constitutes the proper legal basis for the Commission’s proposal.

Pursuant to Article 153(2) of the TFEU, the improvement in particular of the working environment to protect workers’ health and safety is an aspect of social policy where the EU shares competence with the Member States.

• Subsidiarity (for non-exclusive competence)

As risks to workers’ health and safety are broadly similar across the EU, there is a clear role for the EU in supporting Member States to address such risks.

Data gathered in the preparatory work indicate wide differences in the Member States regarding the setting of limit values for the carcinogens under this proposal.\(^{17}\) Some Member

\(^{17}\) See Table 1 in Annex 6 in the impact assessment.
States have already established binding limit values that are at the same value or lower than the value recommended by the ACSH. This demonstrates that unilateral national action is possible as regards setting a limit value for these chemical agents. However, there are also many cases where Member States have no limit values or ones that are less protective of worker health than the value put forward in this proposal.\(^{18}\) In addition, where national limit values exist, they vary considerably, leading to different levels of protection.\(^{19}\) Some of these limits are considerably higher than recommended by scientific evidence.

Under such circumstances minimum standards for workers’ health protection against the risks arising from exposure to these carcinogens cannot be ensured for all EU workers in all Member States by actions taken by Member States alone. The proportion of potentially exposed workers who lack such legal protection was taken into account in the analysis of impacts of introducing a limit value for each of the considered carcinogens. In that framework, a subsidiarity and proportionality check was carried out for each specific agent, which indicated that, where relevant data were available, introduction of proposed limit values would improve legal protection for an estimated 33% to 98% of exposed workers.\(^{20}\)

It follows that action taken at EU level to achieve the objectives of this proposal appears to be necessary and in line with Article 5(3) of the TEU.

Absent or too high limit values also provide potential incentive for companies to locate their production facilities in Member States with the lower standards, thus distorting the cost of production. In all cases, differences in labour standards have an impact on competitiveness, because they impose different costs on operators. This distortion of the single market may be reduced by creating a level playing field through the establishment of clear specific minimum standards for worker protection in the Member States.

Moreover this proposal will encourage more flexibility in cross-border employment, because workers can be reassured that they will enjoy minimum standards and levels of protection of their health in all the Member States.

Amending the Directive can only be done at EU level and after a two-stage consultation of the social partners (management and labour) in accordance with Article 154 of the TFEU.

- **Proportionality**

  This proposal makes a step forward to achieve the objectives set to improve living and working conditions of workers by amending the Directive.

  With regard to the values proposed, socio-economic feasibility factors have been taken into account after long and intensive discussions with all stakeholders (representatives from employees’ associations, representatives from employers’ associations, and representatives from governments).

  This proposal leaves Member States the possibility to keep or set more favourable standards for workers and the flexibility to take into account specific features in their national situation. In accordance with Article 153(4) of the TFEU, the provisions in this proposal do not prevent

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\(^{18}\) See Table 2 in Annex 6 in the impact assessment.

\(^{19}\) For example for 1,3-butadiene, the values range from 4.5 to 100 mg/m\(^3\). For ethylene oxide, values range from 0.84 to 90 mg/m\(^3\).

\(^{20}\) See Table 4 in Annex 6 to the impact assessment.
any Member State from maintaining or introducing more stringent protective measures compatible with the Treaties, in the form for example of lower limit values. Article 153(3) of the TFEU gives Member States the possibility to entrust management and labour, at their joint request, with the implementation of directives adopted pursuant to Article 153(2) of the TFEU, thus respecting well established national arrangements for regulation in this area.

It follows that in line with the principle of proportionality, as set out in Article 5(4) of the TEU, this proposal does not go beyond what is necessary in order to achieve those objectives.

• **Choice of instrument**

Article 153(2)(b) of the TFEU specifies that minimum requirements in the field of workers’ health and safety protection may be adopted ‘by means of directives’.

3. **RESULTS OF EX POST EVALUATIONS, STAKEHOLDER CONSULTATIONS AND IMPACT ASSESSMENTS**

• **Ex post evaluations/fitness checks of existing legislation**

An independent ex-post evaluation of the Directive (as part of the overall occupational health and safety *acquis*) has recently been concluded. Apart from the interface between the REACH Regulation and the Directive, the key issues identified in that evaluation are outside the scope of the proposal, which addresses specifically the technical amendment of Annexes to the Directive rather than broader policy questions regarding its operation or relevance.

• **Stakeholder consultations**

**Two stage consultation of the European social partners in accordance with Article 154 of the TFEU**

For this legislative proposal in the field of social policy, the Commission carried out a two-stage consultation of the European social partners in accordance with Article 154 of the TFEU.

The first stage of consultation on the protection of workers from risks related to exposure to carcinogens, mutagens and chemical agents toxic for reproduction at work was launched on 6 April 2004.

In accordance with Article 154(2) of the TFEU, the social partners were asked to give their opinions on the possible direction of EU action in this field. This first phase confirmed that action needs to be taken at EU level to introduce better standards across the EU, and to tackle situations involving workers’ exposure. All the European social partners who replied to the consultation underlined the importance they attached to protecting workers from the health risks in this area.

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21 Union of Industrial and Employers’ Confederations of Europe (UNICE), European Centre of Enterprises with Public Participation and of Enterprises of General Economic Interest (CEEP), European Association of Craft, Small and Medium-Sized Enterprises (UEAPME), European Trade Union Confederation (ETUC), European Confederation of Executives and Managerial Staff (CEC), Confederation of National Associations of Tanners and Dressers of the European Community (COTANCE), European Trade Association of Hotels, Restaurants and Cafés in Europe (HOTREC), European Federation of Trade Unions in the Food, Agriculture and Tourism Sectors and Allied Branches (EFFAT), Union Network International — Europe Hair & Beauty (UNI-Europa Hair&Beauty).
However, while all respondents acknowledged the relevance of existing legislation, their views differed as to the strategy and direction of future action and which factors should be taken into consideration.\textsuperscript{22}

The second stage of consultation was launched on 16 April 2007 in accordance with Article 154(3) of the TFEU on the content of the proposal.

The specific points for consultation were:

- including chemical agents toxic for reproduction (categories 1A and 1B) in the scope of Directive 2004/37/EC;
- including limit values for more chemical agents in Annex III of Directive 2004/37/EC;
- introducing criteria for setting limit values for carcinogens and mutagens;
- focusing on training and information requirements.

The Commission received replies from seven European social partner organisations.\textsuperscript{23} In their replies these organisations reaffirmed their approach to the prevention of occupational risks derived from carcinogens and mutagens at work, as outlined in their responses to the first stage consultation.

The responses gathered can be summarized as follows:

- **there were no significant divergences** on the methodologies to be used and the criteria to be set up for the derivation of limit values. The introduction of criteria for limit values setting was seen as generally positive. However, socio-economic impact assessments and the consideration of feasibility factors should be part of the criteria. Social partners expressed the view that the ACSH should play an important role in the setting the limit values.
- **there was an overall agreement** on the need for effective implementation of training and information requirements, an issue considered to be a key aspect of the prevention policy.
- **the revision of binding limit values** should be examined in the light of the implementation of REACH and of the relationship and interaction between limit values and DNELs (Derived No Effect Levels) derived under REACH for hazardous chemicals.

While the formal social partners consultation process was completed in 2007, the following ACSH consultation described below, where social partners were present alongside Member States representatives, ensured that the social partners were duly informed about options for limit values and actively participated in identifying the preferred ones.

\textsuperscript{22} CISNET EMPL 8676 of 15 June 2006.

\textsuperscript{23} Four from employers’ organisations (Business Europe, Eurocommerce, European Association of Craft Small and Medium-sized Enterprises (UEAPME) and European Cement Industry), two from workers’ organisations (European Trade Union Confederation (ETUC), and European Federation of Building and Woodworkers (EFBWW)) and one from an independent organisation (British Occupational Hygiene Society (BOHS)).
At the end of the preparatory process, the Commission organised a meeting on 21 April 2016 with the social partners to present the envisaged scope and approach for the draft Directive. This built on the two-stage consultations and the detailed discussions, which have been undertaken in the context of the ACSH on specific substances and limit values to be inserted in the annexes of the Directive.

Consultation of the ACSH – through the tripartite Working Party ‘Chemicals at the Workplace’ (WPCs)

Following the social partner consultation, the Commission informed the members of the WPCs at its meeting in April 2008 on its intention to propose a revision of the Directive. An in-depth discussion on the results of the study contracted by the Commission (‘IOM study’\(^{24}\)) based on draft reports for individual chemical agents took place at the meeting in March 2011. The discussions on the individual chemical agents took place at various meetings of the WPCs in 2011,\(^{25}\) 2012\(^{26}\) and 2013,\(^{27}\) resulting in one opinion and two supplementary opinions adopted by the plenary of the ACSH in 2012\(^{28}\) and 2013.\(^{29,30}\)

The consultation process results included support for the following:\(^{31}\)

- to bring a limited number of process generated substances under the scope of the Directive by including them in Annex I;
- to revise existing limit values in Annex III in the light of the most recent scientific data, and to add additional limit values for a limited number of substances in Annex III where available information, including scientific and technical data supports this.

The limit values agreed upon by the ACSH were taken up in this proposal.

Meetings with the industry and the workers’ representatives

\(^{24}\) IOM Research Project P937/99, May 2011 – Health, social-economic and environmental aspects of possible amendments to the EU Directive on the protection of workers from the risks related to exposure to carcinogens and mutagens at work

\(^{25}\) Meeting of the WPCs on 23 March 2011; Meeting of the WPCs on 15 June 2011; Meeting of the WPCs on 26 October 2011.

\(^{26}\) Meeting of the WPCs on 21 March 2012; Meeting of the WPCs on 6 June 2012; Meeting of the WPCs on 21 November 2012.

\(^{27}\) Meeting of the WPCs on 6 March 2013; Meeting of the WPCs on 19 June 2013; Meeting of the WPCs on 2 October 2013.

\(^{28}\) Opinion on the approach and content of an envisaged proposal by the Commission on the amendment of Directive 2004/37/EC on Carcinogens and Mutagens at the workplace. Adopted on 05/12/2012 (Doc. 2011/12).

\(^{29}\) Supplementary opinion on the approach and content of an envisaged proposal by the Commission on the amendment of Directive 2004/37/EC on Carcinogens and Mutagens at the workplace. Adopted on 30/05/2013 (Doc. 727/13).


\(^{31}\) The three adopted ACSH opinions include, where necessary, specific comments from the interest groups (the social partners and Member States) which broadly reflect the principal points maintained by each interest group throughout discussions of the Working Party ‘Chemicals at the Workplace’ (WPCs). In many cases there are no specific comments as there was a consensus view of the three interest groups. As such the final ACSH Opinions should be taken as representative of the views of stakeholder groups represented.
From 2013 to 2015, a number of meetings took place between the Commission services and industry and workers representatives concerned about specific chemical agents subject to the initiative.\textsuperscript{32} The main purpose of the meetings requested by industry was to obtain information on the process for amending the legislation in general and on the intention of the Commission with regard to the proposed value for particular chemical agents, such as respirable crystalline silica, hardwood dust or refractory ceramic fibres.

- **Collection and use of expertise**

In reviewing or setting new limit values under the Directive, a specific procedure is followed. It involves seeking scientific advice principally from the SCOEL and consulting the ACSH. The Commission can also refer to scientific information sourced elsewhere as long as the data are adequately robust and are in the public domain (e.g. International Agency for Research on Cancer monographs or conclusions from science committees setting national limit values).

SCOEL was set up by Commission Decision 2014/113/EU\textsuperscript{33} to evaluate the health effects of chemical agents on workers at work. The work of SCOEL directly supports EU regulatory activity in the field of occupational safety and health. It develops high quality comparative analytical knowledge and it ensures that Commission proposals, decisions and policy relating to the protection of workers’ health and safety are based on sound scientific evidence. SCOEL assists the Commission, in particular, in evaluating the latest available scientific data and in proposing occupational exposure limits for the protection of workers from chemical risks, to be set at EU level pursuant to Council Directive 98/24/EC and the Directive.

For the purpose of this initiative, the Commission services have used the relevant chemical agent-related SCOEL recommendation where available. The SCOEL recommendations are published on the internet\textsuperscript{34}.

Following the two stage consultation of the European social partners, the Commission’s Directorate-General for Employment and Social Affairs published on 25 July 2008 an open call for tender. The aim was to carry out an assessment of the social, economic and environmental impacts of a number of policy options concerning the protection of workers health from risks arising from possible exposure to carcinogenic chemical agents at the workplace. The resulting IOM study contained full reports on 25 carcinogenic chemical agents and two other policy issues relating to the effectiveness of risk management measures and risk based criteria for the setting of occupational exposure limit values. The outcome of this study (summary report and individual chemical agents’ reports) provides the main basis for the impact assessment for this proposal.\textsuperscript{35}

\textsuperscript{32} The following organisations, among others, discussed bilaterally with the Commission services on specific chemical agents subject to the initiative: NEPSi (European Network for Silica formed by the Employee and Employer European sectoral associations); Euromines and IMA (Industrial Minerals Association) for Silica; ECFIA (European Ceramic Fibres Industry Association) and Unifrax for Refractory Ceramic Fibres (RCF); CEEMET (Council of European Employers of the Metal, Engineering and Technology-Based Industries) and Eurometaux for metals as Chromium and Beryllium; BeST (Beryllium Science & Technology Association) for Beryllium. The Commission also participated in meetings organised annually by Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs with the European Glass and Ceramic Industry.


\textsuperscript{34} https://circabc.europa.eu.

\textsuperscript{35} The following links are only provided for those chemical agents subject to the first amendment of the CMD Executive summary report ; Summary report ; 1,2-epoxypropane, 1,3-butadiene, 2 nitropropane; Acrylamide;
- **Impact assessment**

This proposal is supported by an impact assessment\(^{36}\).

The following options for different limit values for each of the 13 chemical agents were examined:

- A baseline scenario of no further EU action for each chemical agent in this initiative (Option 1).
- The adoption of the values agreed by the ACSH (option 2). As already indicated, for each of the 13 chemical agents, the scientific and technical data included in SCOEL recommendations (where available) has been considered at the ACSH, resulting in their opinions of the ACSH on limit values to be proposed.
- Where appropriate and depending on specific characteristics of the agents, flanking options to either propose a limit value which, compared with the ACSH value, is lower (theoretically more protective of worker health) or higher (theoretically less protective of worker health) were also examined as option 3 and/or 4 respectively, for each chemical agent. These flanking values were drawn from the IOM study, for which they were established by preference:
  
  i) from a SCOEL recommendation where available;
  
  ii) as values reflecting available data (for example taking account of existing limit values in the Member State ) or;
  
  iii) on the basis of recommendations from the contractor (for example taking into account non-EU limit values). Where available data did not support setting a lower or higher limit value than the ACSH value, these options were discounted.

As regards respirable crystalline silica dust, options 2, 3 and 4 included the possibility of inclusion in Annex I to the Directive together with the establishment of a limit value for respirable crystalline silica dust (respirable fraction) in Annex III.

Other policy options, such as introducing a ban on the use of the chemical agents, self-regulation, market-based instruments, regulation under REACH, guidance and other implementation support for the Directive have also been considered. As regards the interface between REACH and the Directive, the EU General Court recently clarified in a case currently under appeal\(^ {37}\) the meaning of the first set of the conditions set out in Article 58(2) of REACH for the granting of an exemption to uses or categories of uses from the authorisation requirement – i.e. *specific EU legislation imposing minimum requirements relating to the protection of human health or the environment for the use of the substance* - as applied to a number of EU Directives, including Directive 2004/37/EC. The General Court held that in so far as Directive 2004/37/EC does not refer to any substance other than benzene, vinyl chloride monomer or hardwood dusts, for which it lays down maximum values for

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occupational exposure, it cannot be considered either ‘specific’ or to impose ‘minimum requirements’, within the meaning of Article 58 (2) of REACH.

Further, the concerned Commission is collaborating with partners in their relevant policy and technical fields with regard to the relationship between REACH and occupational health and safety chemicals directives, and especially the relationship between the limit value and derived no-effect level (DNEL) concepts, and will develop guidance on this. The Commission services, Member States, and the social partners have all expressed their view that occupational health and safety directives are the appropriate EU legislative framework to establish harmonised limit values for the protection of workers.

An analysis of economic, social and environmental impacts of the different policy options for each chemical agent was carried out. The analysis was carried out on the basis of the IOM Study evaluation of the health, socio-economic and environmental aspects of the proposed amendments to the Directive. The comparison of the policy options and the choice of the preferred option were carried out on the basis of the following criteria: the scientific advice (in particular SCOEL recommendations where available), effectiveness, efficiency and coherence. Cost and benefits were calculated over a 60-year period, in line with the future cancer burden estimated over the same period, to take proper account of the cancer latency period.

For some carcinogens (e.g. chromium (VI) compounds, hardwood dust and respirable crystalline silica dust) a clear preferred value emerged. For others (e.g. 2-nitropropane and acrylamide) identified costs/benefits of the baseline (no action) and setting an EU limit value were closely matched.

The values agreed by the ACSH were retained as a policy choice in respect of all the 13 chemical agents in this proposal.

As regards the impact on workers, this proposal should result in benefits in terms of preventing workers from getting avoidable work-related cancer, and thus preventing unnecessary suffering and illness. In addition, this proposal would also prevent unnecessary health costs, as follows:

- respirable crystalline silica dust: the proposed limit value at 0.1 mg/m³ will provide for 99,000 avoided cancer cases by 2069 for a total monetized health benefit quantified between EUR 34 and 89 billion;
- hardwood dust: a limit value of 3 mg/m³ will provide for a total monetized health benefit between EUR 12 and 54 million;
- benefits are also expected in relation to introducing an exposure limit value at 0.025 mg/m³ for all chromium (VI) compounds.

The introduction of the preferred option would therefore reduce cancer and decrease the economic burden derived by workers’ exposure to hazardous substances.

As regards the impact on employers, it is important, from an economic point of view, to distinguish between costs that do or do not create incentives for improvements in health and safety. The advantages for businesses of introducing EU wide limit values is that the proposal

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38 See section 5 of the impact assessment for a detailed analysis of the impacts of the different policy options and the manner in which they compare.
will help firms addressing costs that would, otherwise, negatively affect their business prospects in the long-term in the case of non-compliance.

For the majority of carcinogens, the impact on operating costs for business (including small and medium enterprises) will be minimal as only small adjustments will be needed to ensure full compliance.

Also the proposal does not result in any additional information obligations and will not lead to an increase in administrative burdens on firms.

As regards the impact on Member States/national authorities, given the substantial economic costs imposed on workers due to their exposure to hazardous substances, this proposal would also contribute to mitigating financial losses sustained by Member State’s social security systems. From an economic point of view, the coverage and adequacy of EU-wide limit values is the single most important determinant of who bears the cost burden of occupational ill health.

Administrative and enforcement costs will differ according to the present status of each chemical agent in each Member State, but should not be significant. Furthermore, establishment of limit values at EU level eliminates the need for national authorities to independently evaluate each carcinogen thereby removing an inefficiency of repetition of identical tasks.

Based on the experience gathered from the work of the Senior Labour Inspectors Committee (SLIC) and having regard to the way enforcement activities are organised in different Member States it is unlikely that the introduction of new limit values in the Directive would have any impact on the overall costs of inspection visits. Those are mostly planned independently of the proposal, mainly based on complaints filed during a given year and according to the inspection strategies defined by a given authority. It should also be added that the existence of a limit value, by bringing clarity regarding the acceptable levels of exposure, facilitates the work of inspectors by providing a helpful tool for compliance checks.

Additional administrative costs might be incurred by authorities as regards the necessity to provide information and training on the revision to staff, as well as to revise compliance checklists. However, these costs are minor in comparison with the overall costs of functioning incurred by the national enforcement authorities.

From the comparison of the options and the analysis of costs and benefits, it can be concluded that the proposal achieves the objectives set at overall reasonable costs and that the proposal is appropriate.

The proposal does not have significant environmental impacts.

- **Regulatory fitness and simplification**

  **Impact on SMEs**

  This proposal does not contain lighter regimes for micro-enterprises or for SMEs. The reason is that under the Directive, SMEs are not exonerated from the obligation to eliminate or reduce to a minimum the risks arising from occupational exposure to carcinogens or mutagens.
For many of the agents covered in this initiative, limit values already exist at national level, even if the level as such differs between Member States. Establishing the limit values provided for in this proposal should have no impact on those SMEs situated/located in those Member States where the national limit values are either equal to or lower than the proposed values. However, due to differences in limit values at national level, there will in some cases, depending on industry practice, be an economic impact in those Member States (and economic operators established therein) that currently have higher occupational exposure limits established for the chemical agents that are the subject of the proposal.

For the majority of carcinogens, the impact on operating costs for business (including SMEs) will be minimal as only small adjustments will be needed to ensure full compliance. Also this proposal will not impose any additional information obligations or lead to an increase in administrative burdens on firms and is not likely to generate any significant environmental costs.

**Impact on EU competitiveness or international trade**

Risk prevention and the promotion of safer and healthier conditions in the workplace are key, not just to improving job quality and working conditions, but also to promoting competitiveness. Keeping workers healthy has a direct and measurable positive impact on productivity, and contributes to improving the sustainability of social security systems. Implementing the provisions of this proposal would have a positive impact on competition within the single market. Having EU-wide limit values for those agents will remove competitive distortion between firms located in Member States with different national limit values.

It should not have a significant impact on the external competitiveness of EU firms as many of the values proposed are similar to those in other countries, notably the EU’s main trading partners, such as the USA, Australia or Switzerland.

- **Impact on fundamental rights**

The objectives of the proposal are consistent with the fundamental rights as set out in the EU Charter of Fundamental Rights, in particular Article 2 (Right to life) and Article 31 (Right to fair and just working conditions which respect his/her health, safety and dignity).

4. **BUDGETARY IMPLICATIONS**

The proposal does not require additional budget and staff resources for the EU budget or bodies set up by the EU.

5. **OTHER ELEMENTS**

- **Implementation plans and monitoring, evaluation and reporting arrangements**

The proposal provides for the monitoring of the number of occupational diseases and related occupational cancer cases using the available data sources, as well as the monitoring of costs

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39 See Table 3 in Annex 6 to the impact assessment.

40 For example, the proposed value for exposure to hardwood dusts is 3 mg/m$^3$, while the value in Canada and Australia is 1 mg/m$^3$. The proposed value for vinyl chloride monomer is 1 ppm, the value in the USA and Canada is also 1 ppm. And the value of 0.1 mg/m$^3$ proposed for respirable crystalline silica is also established in the USA, Australia and Canada.
related to occupational cancer for economic operators (e.g. loss of productivity) and social security systems.

A compliance assessment will be carried out for the transposition. Given the data challenges it is suggested to make use of the next ex post evaluation exercise in accordance with Article 17a (4) of Directive 89/391/EEC, to define the baseline values (benchmark) that will enable assessing the effectiveness of the revision of the Directive. This seems reasonable considering that due to the long latency periods to develop cancer (10 to 50 years), it will not be possible to measure the real impact of the revision before 15-20 years.

• **Explanatory documents (for directives)**

Member States must send the Commission the text of national provisions transposing the Directive and a correlation table between those provisions and the Directive. Unambiguous information on the transposition of the new provisions is needed to ensure compliance with the minimum standards established by the proposal. The estimated additional administrative burden of providing explanatory documents is not disproportionate (it is one-off and should not require many organisations to be involved). The explanatory documents can be drafted more efficiently by the Member States.

In view of the above, it is suggested that Member States undertake to notify the Commission of their transposition measures by providing one or more documents explaining the relationship between the components of the Directive and the corresponding parts of national transposition instruments.

• **Detailed explanation of the specific provisions of the proposal**

*Article 1*

Article 1 states that the Directive is amended through the addition in Annex I of a new entry 6 to include ‘work involving exposure to respirable crystalline silica dust generated by a work process’.

Silica or silicon dioxide (SiO$_2$) is a group IV metal oxide that naturally occurs in both crystalline and amorphous forms. The various forms of crystalline silica are: α-quartz, β-quartz, α-tridymite, β-tridymite, α-cristobalite, β-cristobalite, keatite, coesite, stishovite, and moganite. The word ‘crystalline’ used in Article 1 refers to the orientation of SiO$_2$ molecules in a fixed pattern as opposed to a non-periodic, random molecular arrangement defined as amorphous. The three most common crystalline forms of silica encountered in the workplace environment are quartz (CAS No 14808-60-7), cristobalite (CAS No 14464-46-1) and tridymite (CAS No 15468-32-3).

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41 These include data that could be collected by Eurostat on occupational diseases if the results of the on-going feasibility study are positive, as well as on other work-related health problems and illnesses in accordance with Regulation (EC) No 1338/2008, data submitted by Member States in the national reports on the implementation of EU occupational health and safety *acquis*, submitted in accordance with Article 17(a) of Directive 89/391/EEC and data notified by employers to the competent national authorities on cases of cancer identified in accordance with national law and/or practice as resulting from occupational exposure to a carcinogen or mutagen in accordance with Article 14(8) of Directive 2004/37/EC, and which may be accessed by the Commission in accordance with Article 18 of Directive 2004/37/EC.

42 [http://monographs.iarc.fr/ENG/Monographs/vol100C/mono100C-14.pdf](http://monographs.iarc.fr/ENG/Monographs/vol100C/mono100C-14.pdf); IARC (1997); Silica, some silicates, coal dust and paraaramid fibrils, IARC Monogr Eval Carcinog Risks Hum, 68: 1–475. PMID:9303953.

43 Chemical Abstracts Service Number
The words ‘respirable crystalline silica dust’ used in Article 1 refer to the dust particles that reach the alveoli.

**Articles 3 to 5**

Articles 3 to 5 contain the usual provisions on transposition into the Member States’ national law. In particular, Article 4 refers to the date of entry into force of the Directive.

**Annex**

The term ‘limit value’ used in the Annex is defined in Article 2(c) of the Directive. Limit values address the inhalation route of exposure, describing a maximum airborne concentration level for a given chemical agent above which workers should not be exposed, on average, during a defined time period.

The limit value for respirable crystalline silica dust applies to the ‘respirable fraction’.

A ‘skin notation’ is assigned to the limit values for occupational exposure for the following carcinogens: acrylamide, ethylene oxide and hydrazine. A skin notation is assigned for each chemical agent where the SCOEL has assessed that dermal absorption could contribute substantially to the total body burden and consequently to concerns regarding possible health effects. A skin notation assigned to a limit value identifies the possibility of significant uptake through the skin. Employers have the obligation to take into account such notations when performing risk assessment and when implementing preventive and protective measures for a particular carcinogen or mutagen in accordance with the Directive.
Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

amending Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union (‘TFEU’), and in particular Article 153(2) thereof,

Having regard to Directive 2004/37/EC of the European Parliament and of the Council of 29 April 2004 on the protection of workers from the risks related to exposure to carcinogens or mutagens at work (sixth individual Directive within the meaning of Article 16(1) of Council Directive 89/391/EEC), and in particular Article 17(1) thereof, 44

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee, 45

Having regard to the opinion of the Committee of the Regions, 46

Acting in accordance with the ordinary legislative procedure,

Whereas:

(1) Directive 2004/37/EC aims to protect workers against risks to their health and safety from exposure to carcinogens or mutagens at the workplace and lays down minimum requirements to that effect including limit values, on the basis of the available scientific and technical data.

(2) The limit values should be revised when necessary in the light of scientific data.

(3) For some carcinogens and mutagens it is necessary to consider other absorption pathways, including the possibility of penetration through the skin, in order to ensure the best possible level of protection.

(4) The Scientific Committee on Occupational Exposure Limits (‘the Committee’) assists the Commission, in particular, in evaluating the latest available scientific data and in proposing occupational exposure limits for the protection of workers from chemical risks, to be set at EU level pursuant to Council Directive 98/24/EC 47 and Directive

45 OJ C ., p. .
46 OJ C ., p. .
For the chemical agents o-toluidine and 2-nitropropane, there were no Committee recommendations available and other sources of scientific information, adequately robust and in the public domain, were considered.\(^{48,49}\)

(5) There is sufficient evidence of the carcinogenicity of respirable crystalline silica dust. On the basis of available information, including scientific and technical data, a limit value for respirable crystalline silica dust should be established. Respirable crystalline silica dust generated by a work process is not subject to classification in accordance with Regulation (EC) No 1272/2008 of the European Parliament and of the Council.\(^{50}\) It is therefore appropriate to include work involving exposure to respirable crystalline silica dust generated by a work process in Annex I to Directive 2004/37/EC and to establish a limit value for respirable crystalline silica dust (‘respirable fraction’).

(6) Guides and good practice developed through initiatives such as the Social Dialogue "Agreement on Workers' Health Protection Through the Good Handling and Use of Crystalline Silica and Products Containing it" (NEPSi) are valuable instruments to complement regulatory measures and in particular to support the effective implementation of limit values.

(7) The limit values set out in Annex III to Directive 2004/37/EC for vinyl chloride monomer and hardwood dusts should be revised in the light of more recent scientific data.

(8) 1,2-Epoxypropane meets the criteria for classification as carcinogenic (category 1B) in accordance with Regulation (EC) No 1272/2008 and therefore is a carcinogen within the meaning of Directive 2004/37/EC. On the basis of the available information, including scientific and technical data, it is possible to identify a clear exposure level below which exposure to this carcinogen is not expected to lead to adverse effects. It is therefore appropriate to establish such a limit value for 1,2-epoxypropane.

(9) 1,3-Butadiene meets the criteria for classification as carcinogenic (category 1A) in accordance with Regulation (EC) No 1272/2008 and therefore is a carcinogen within the meaning of Directive 2004/37/EC. It is possible, on the basis of the available information, including scientific and technical data, to set a limit value for this carcinogen. It is therefore appropriate to establish a limit value for 1,3-butadiene.

(10) 2-Nitropropane meets the criteria for classification as carcinogenic (category 1B) in accordance with Regulation (EC) No 1272/2008 and therefore is a carcinogen within the meaning of Directive 2004/37/EC. It is possible, on the basis of the available information, including scientific and technical data, to set a limit value for this carcinogen. It is therefore appropriate to establish a limit value for 2-nitropropane.

(11) Acrylamide meets the criteria for classification as carcinogenic (category 1B) in accordance with Regulation (EC) No 1272/2008 and therefore is a carcinogen within the meaning of Directive 2004/37/EC. It is possible, on the basis of the available information, including scientific and technical data, to set a limit value for acrylamide. The Committee identified for acrylamide the possibility of significant uptake through

\(^{48}\) http://monographs.iarc.fr/ENG/Monographs/vol77/mono77-11.pdf

http://monographs.iarc.fr/ENG/Monographs/vol99/mono99-15.pdf and

http://monographs.iarc.fr/ENG/Monographs/vol100F/mono100F-11.pdf

\(^{49}\) http://monographs.iarc.fr/ENG/Monographs/vol1-42/mono29.pdf and

http://monographs.iarc.fr/ENG/Monographs/vol71/mono71-49.pdf

the skin. It is therefore appropriate to establish a limit value for acrylamide and to assign to it a notation indicating the possibility of significant dermal uptake.

(12) Certain chromium (VI) compounds meet the criteria for classification as carcinogenic category 1A or 1B in accordance with Regulation (EC) No 1272/2008 and therefore are carcinogens within the meaning of Directive 2004/37/EC. It is possible, on the basis of the available information, including scientific and technical data, to set out a limit value for these chromium VI compounds. It is therefore appropriate to establish a limit value for chromium (VI) compounds that are carcinogens within the meaning of Directive 2004/37/EC.

(13) Ethylene oxide meets the criteria for classification as carcinogenic (category 1B) in accordance with Regulation (EC) No 1272/2008 and therefore is a carcinogen within the meaning of Directive 2004/37/EC. It is possible, on the basis of the available information, including scientific and technical data, to set a limit value for this carcinogen. The Committee identified for ethylene oxide the possibility of significant uptake through the skin. It is therefore appropriate to establish a limit value for ethylene oxide and to assign to it a notation indicating the possibility of significant dermal uptake.

(14) o-Toluidine meets the criteria for classification as carcinogenic (category 1B) in accordance with Regulation (EC) No 1272/2008 and therefore is a carcinogen within the meaning of Directive 2004/37/EC. It is possible, on the basis of the available information, including scientific and technical data, to set a limit value for this carcinogen. It is therefore appropriate to establish a limit value for o-toluidine.

(15) Certain refractory ceramic fibres meet the criteria for classification as carcinogenic category 1B in accordance with Regulation (EC) No 1272/2008 and therefore are carcinogens within the meaning of Directive 2004/37/EC. It is possible, on the basis of the available information, including scientific and technical data, to set a limit value for the refractory ceramic fibres which are carcinogens within the meaning of Directive 2004/37/EC. It is therefore appropriate to establish a limit value for these refractory ceramic fibres.

(16) Bromoethylene meets the criteria for classification as carcinogenic (category 1B) in accordance with Regulation (EC) No 1272/2008 and therefore is a carcinogen within the meaning of Directive 2004/37/EC. It is possible, on the basis of available information, including scientific and technical data, to set a limit value for bromoethylene. It is therefore appropriate to establish a limit value for bromoethylene.

(17) Hydrazine meets the criteria for classification as carcinogenic (category 1B) in accordance with Regulation (EC) No 1272/2008 and therefore is a carcinogen within the meaning of Directive 2004/37/EC. It is possible, on the basis of available information, including scientific and technical data, to set a limit value for hydrazine. The Committee identified for this carcinogen the possibility of significant uptake through the skin. It is therefore appropriate to establish a limit value for hydrazine and to assign to it a notation indicating the possibility of significant dermal uptake.

(18) This amendment strengthens the protection of workers’ health at their workplace.

(19) The Commission consulted the Advisory Committee on Safety and Health at Work, set up by Council Decision of 22 July 2003. It also carried out a two-stage consultation of the European social partners in accordance with Article 154 of the TFEU.

(20) This Directive respects the fundamental rights and principles enshrined in the Charter of Fundamental Rights of the European Union, in particular in Article 31(1) thereof.
The limit values set in this Directive will be kept under review in the light of the implementation of Regulation (EC) No 1907/2006, in particular to take account of the interaction between limit values set out under Directive 2004/37/EC and DNELs (Derived No Effect Levels) derived for hazardous chemicals under that Regulation.

Since the objectives of this Directive, which are to improve living and working conditions and to protect the health of workers from the specific risks arising from exposure to carcinogens, cannot be sufficiently achieved by the Member States, but can be better achieved at EU level, the EU may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5(3) of the Treaty on European Union. In accordance with the principle of proportionality, as set out in Article 5(4) of the TEU, this Directive does not go beyond what is necessary in order to achieve those objectives.

Given that the present act concerns the workers' health at their workplace, the deadline for transposition should be two years.

Directive 2004/37/EC should therefore be amended accordingly,

HAVE ADOPTED THIS DIRECTIVE:

Article 1

Directive 2004/37/EC is amended as follows:

1. In Annex I the following point is added:

   ‘6. Work involving exposure to respirable crystalline silica dust generated by a work process’.

2. Annex III is replaced by the text in the Annex to this Directive.

Article 2

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive not later than two years after the date of entry into force of this Directive. They shall forthwith communicate to the Commission the text of those provisions.

   When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

2. Member States shall communicate to the Commission the text of the provisions of national law that they adopt in the field covered by this Directive.

Article 3

This Directive shall enter into force on the twentieth day following that of its publication in the Official Journal of the European Union.

Article 4

This Directive is addressed to the Member States.
Done at Brussels,

For the European Parliament
The President

For the Council
The President