

A socio-economic impact study to an EU limit value for RCS in CAD compared to CMD

A study conducted for the European Association of Silica Producers (EUROSIL)

- EXECUTIVE SUMMARY -

Background of the study

The European Commission's Advisory Committee for Safety and Health (ACSH) issued an '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'¹. The Opinion includes a chapter regarding the proposed regulatory approach towards process generated Respirable Crystalline Silica (RCS). In particular, the Opinion notes that it is agreed that there should be a Binding Occupational Limit Value of 0,1 mg/ m³ introduced for RCS and that there are legal possibilities to introduce this limit at European Union (EU) level through Directive 98/24/EC, Chemical Agents at Work Directive (CAD) or through Directive 2004/37/EC, Carcinogens and Mutagens at Work Directive (CMD).

Prior to the Advisory Committee Opinion, the European Commission already commissioned "Socioeconomic, health and environmental impact of possible amendments to the European Carcinogens and Mutagens Directive", the "SHECan" study², which was finalised in 2011. The SHECan study includes an extensive analysis of the consequences of setting a European Limit Value for RCS at different exposure levels. However, the study does not consider the option of including a limit value into the Chemical Agents at Work Directive. Also, the report does not analyse the impacts of the hierarchy of obligations resulting from the Carcinogens and Mutagens at Work Directive.

Against this background, EUROSIL, the official body for representation of the European industrial silica producers, has commissioned in October 2013 a study to compare the socio-economic costs of having this Binding Limit Value (BLV) of 0,1 mg/m³ set in the CMD versus an approach where it is set in the CAD, analysing and comparing the impact of each obligation of the Directives. Additionally, the option of an Indicative Limit Value (ILV) of 0,1 mg/m³ in the CAD has been assessed. The study is performed on the basis of an EU-wide questionnaire, sent out to all the associations and their members of the concerned sectors: Building materials (cement, ceramics, gypsum, plaster, etc.), Mining/quarries/minerals, Construction, Foundry, Glass and Paints.

Main results

*The study comes to the conclusion that additional efforts of **152 billion Euros** for a 10-year period (2015 to 2025) are expected for the European industry in case of an implementation of a binding limit value in the CMD while introducing a binding limit value in the CAD is related to **25 billion Euros** expected costs (23 billion Euros for an indicative limit value). These results are based on an extrapolation of questionnaire data. An uncertainty analysis has been conducted and maximum results have also been calculated that are roughly twice as high.*

The quality checked basic pure data (minimum results) received from European companies within 6 weeks after the start of the project, indicate additional efforts for a BLV in the CMD at 1,4 billion Euros in comparison to 0,183 billion Euros for an binding limit value in the CAD (0,165 billion Euros for an indicative limit value). On the basis of these minimum results, data have been extrapolated.

¹ European Commission ACSH, 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, 5 December 2012

² IOM, Socioeconomic, health and environmental impact of possible amendments to the European Carcinogens and Mutagens Directive (SHEcan study), May 2011

Furthermore, direct quality checked feedback of companies leads to job losses for the European industry of 7508 (without any extrapolation) in case a binding limit value is introduced in the CMD. Less than 50 jobs have been reported in the case of the CAD.

Methodology

The key constitution principle for assessing the socio-economic impacts throughout the questionnaires is taken from the Articles of the two Directives, which describe the different risk reduction and management measures to be implemented in workplaces. The CMD mentions explicitly (on top of the CAD provisions) the use of closed systems and the reduction of exposure as far as technically possible when substitution cannot be applied (which is the case of the great majority of the answers received).

A total amount of 325 questionnaires has been received, of which 252 questionnaires were kept after a thorough quality-check. They contained sufficient useful information of adequate quality and they provide a good basis of information for a collection exercise which only lasted during 3 weeks. The data coming from national associations and company groups, besides the individual company responses, contain aggregated responses of various legal entities and production sites. They therefore represent more individual measure points, which are individually accounted for in the analysis. The coverage of the analysis is thus more extensive than the number of replies suggests. Sufficient workable data have been received for the sectors Building materials and Mining/quarries/minerals. Additional data have been received from the Foundry, Construction and Paints sectors, but not sufficient to make economic extrapolations.

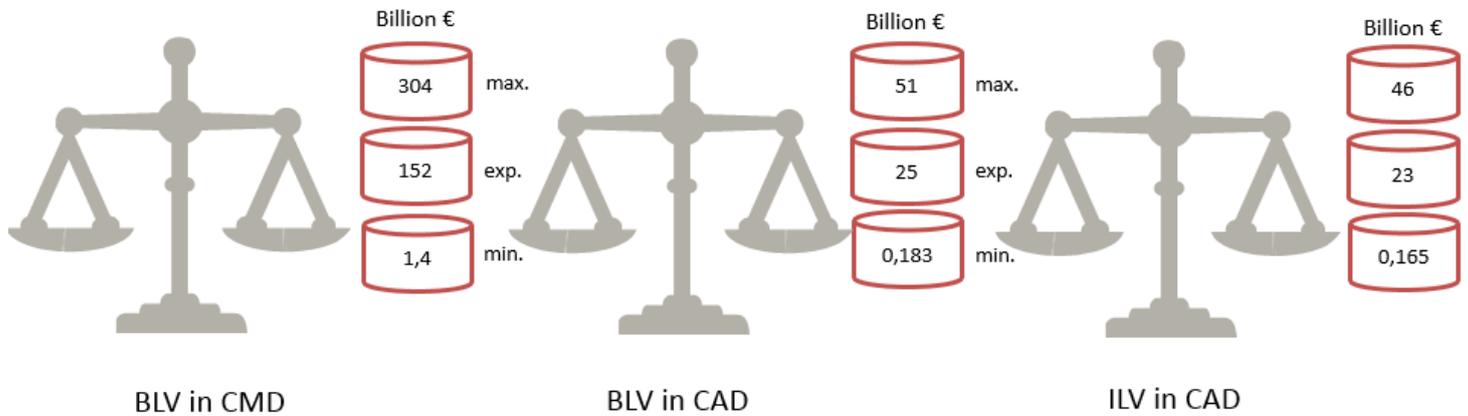
Results and conclusion

An overview of the results can be found on the next page. The Minimum (Min.) results are verified factual data given by the respondents, calculated over a 10-year period without inflation nor extrapolation. Maximum (Max.) results are calculated over a 10-year period, including inflation of 2% and extrapolation to the sector at the EU-level. The Maximum results are only generated for Building materials (annual turnover 68 billion Euros) and Mining/quarries/minerals (annual turnover 168 billion Euros), since these sectors have adequately replied and thus data correspond to a solid base for extrapolation. It results that the Maximum costs of a BLV in the CMD are significantly higher than a BLV or ILV in the CAD. Even by taking a conservative approach and by taking 50% of the Max. results to assess 'Expected results', the costs of implementing the CMD are huge compared to the CAD. Those Expected (Exp.) results take into account the uncertainty that not all companies are involved in process generated RCS, the uncertainty of extrapolating results from various company sizes, and the aggregated composition of each sector (from different activities³). In case extrapolation was not conceivable, Expected results are equal to the Minimum results (in the case of sectors Construction, Foundry and Paints).

For each sector, results of the questionnaire have been separately assessed for small, medium and large enterprises, so as to generate a realistic result as much as possible whilst taking into account the cost per size of company and the share of that company-size on the EU level. It becomes clear that in all sectors and countries and for all categories of companies costs of a BLV in the CMD are significantly higher than for a BLV or ILV in the CAD, looking at either the basic pure data or the extrapolated data.

³ Sectorial data has been aggregated from NACE-codes (rev.2), representing different activities

Detailed overview of all results



<i>Economic impacts for limit values in CAD or CMD</i>	BLV in CMD (bln. €)			BLV in CAD (bln. €)			ILV in CAD (bln. €)		
	Min. results	Exp. results	Max. results	Min. results	Exp. results	Max. results	Min. results	Exp. results	Max. results
Building materials	0,452	77	155	0,091	21	42	0,0819	19	38
Mining/ minerals/ quarries	0,850	75	149	0,056	4	8	0,0504	4	7
Construction	0,085	0,085		0,028	0,028		0,0252	0,0252	
Foundry	0,009	0,009		0,005	0,005		0,0045	0,0045	
Paints	0,003	0,003		0,002	0,002		0,002	0,002	
Total	1,4	152	304	0,183	25	51	0,165	23	46

*totals can deviate from the sum because of numbers rounded off