



Amicus is the UK's largest manufacturing, technical & skilled workers' union, with over 1.2m members in the private and public sectors. Amicus represents members in all parts of UK enterprise and industry. We welcome the opportunity to comment on the proposals for a Workplace Exposure Limit for respirable crystalline silica.

Summary

Amicus supports the setting of a WEL for silica of 0.05 mgm^{-3} .

We do not believe there are significant measurement problems concerning this limit that can not be easily overcome.

HSC Proposal

The HSC proposal for silica states:

"Weighing the views of ACTS alongside the current uncertainties over measurement and enforcement of the 0.05 mgm^{-3} limit, and its impact on industry, HSC's proposal in this CD is to:

- Recommend the WEL is changed now from 0.3 mgm^{-3} to 0.1 mgm^{-3}
- Our intention is a WEL of 0.05 mgm^{-3} in the future, subject to resolution of the measurability difficulties and a regulatory impact assessment."

Amicus supports the proposal put forward by the HSC. However, since we believe that the standard must reduce health risks to a level below 1%, and that there are no practical measurability difficulties, we want to see the intention of the Commission fulfilled in the immediate setting of a WEL of 0.05 mgm^{-3} .

Current standard

Amicus favours the adoption, now, of the single, lower limit of 0.05 mgm^{-3} . This is a direct response to the HSCs description of the current standard, and the history of seeking to set a standard of 0.1 mgm^{-3} , yet in practice producing a standard of 0.3 mgm^{-3} . This is despite the fact that it was claimed that many sectors were able to achieve levels of less than 0.1 mgm^{-3} in 1992.

The situation described in the historical account of the standard is completely unacceptable. Setting a limit now of 0.1 mgm^{-3} would do no more than take us back to the position that was sought in 1992.

At that time it appears that only the quarrying industry was seriously resisting a lower limit, yet the limit was set to accommodate them, when other sectors could, and did, achieve a much better level of control.

The New WEL

In 2006, we now find a similar situation, with the quarry industry representing a major impediment to a lower limit. In the face of this, Amicus believes that a WEL of 0.05 mgm^{-3} should be established, and if necessary, special measures adopted to assist the quarrying industry, or parts of it, in achieving the lowest level of exposure to silica dust that is possible, if it is greater than 0.05 mgm^{-3} . In any case that exposure should not exceed 0.1 mgm^{-3} .

Risks of Silicosis

The CD describes the risk of developing silicosis in several ways, and makes a comparison between the effects of several different exposure standards.

Risks of developing silicosis presented in the HSE Phase 1 review

15 years exposure to respirable crystalline silica (8-hour TWA) mg.m^{-3}	Predicted risks of developing silicosis* within 15 years following exposure (* This refers to a category of silicosis normally associated with some breathing impairment)
0.02	0.25%
0.04	0.5%
0.1	2.5%
0.3	20%

This shows that even at 0.1mgm^{-3} , the predicted risk of developing silicosis over 15 years is still 2.5%. We believe it is immoral to consciously set a standard for silica that accepts this level of risk. The risk should at the very least be below 1%, suggesting a limit of 0.05mgm^{-3} .

Elsewhere the HSE estimates that over a sixty-year period the following number of **silicosis cases** will be prevented at the various proposed exposure limit values.

0.3mg.m^{-3} :	110 cases
0.1mg.m^{-3} :	547 cases
0.05mg.m^{-3} :	883 cases
0.01mg.m^{-3} :	1326 cases

This means that if a 0.1 standard is set rather than 0.05, then the HSC will be accepting 336 extra silicosis cases.

Additionally, over a sixty-year period, HSE predicts that the following number of **silicosis fatalities** will be prevented at the various proposed limits:

0.3mg.m^{-3} :	36 fatalities
0.1mg.m^{-3} :	185 fatalities
0.05mg.m^{-3} :	300 fatalities
0.01mg.m^{-3} :	455 fatalities

This means that if a 0.1 standard is set rather than 0.05, then the HSC will be accepting 115 extra silicosis deaths.

Furthermore, we are very conscious of the advice given by the EU Scientific Committee on Occupational Exposure Limits (SCOEL). In

June 2002, DG Employment published a recommendation from SCOEL concluding that to protect against silicosis, exposure to RCS should be maintained below 0.05 mg.m^{-3} (8-hr TWA).

For all of these reasons, Amicus strongly supports a standard for respirable crystalline silica of 0.05 mgm^{-3} .

Quarry Industry

It is said that quarrying industry will have major problems meeting a 0.05 mgm^{-3} standard. The HSE in the CD state that the 0.4 (later 0.3) mgm^{-3} MEL was set in 1992 to accommodate the quarry industry.

We are very impressed by recent health and safety successes in the quarrying industry, particularly through the work of the Quarries National Joint Advisory Committee.

Recently the QNJAC has been widely congratulated for surpassing its 'Hard Target' in reducing all reportable injuries by 52% in five years from a baseline of 655 to 317 in the reporting year 2004/05.

This achievement has included significant progress against each of the Health and Safety Executive's (HSE) priority programmes – falls from height; slips and trips injuries; manual handling injuries; and work place transport injuries.

The QNJAC has now adopted the title of '*Target Zero – a World Class Industry*' for their next stage of improving health and safety.

Amicus believes that this puts the industry in an excellent position to address any "Hard Targets" that might be set in relation to respirable silica dust. The QNJAC represents an ideal forum for the HSE to use to explore controlling silica to a standard of 0.05 mgm^{-3} . In the event that this cannot be achieved in all cases, best control practices can be agreed and implemented that achieve controls below 0.1 mgm^{-3} and work towards improving controls over a period of time.

Other work activities involving exposure to silica dust

As long ago as 1992, on the basis of the CD, many industry sectors were achieving controls that were then within the 0.1 mgm^{-3} standard. We believe that it is reasonable, over 13 years later, that higher standards of control should be established, and there is every indication that in most cases they can be met.

We have specifically addressed the Quarry sector above, but if there remain any specific silica tasks, or uses of silica, for which there is a problem in meeting the 0.05 mgm^{-3} standard, they should be addressed in a similar way through appropriate joint discussions between the HSE, the industry concerned and worker representatives. If necessary the Advisory Committee on Toxic Substances (ACTS) could play a role in aiding any such discussions.

COSHH Essentials

The CD states that:

“For a WEL set below 0.1 mg.m^{-3} (8-hr TWA), for some industries there could be additional technical challenges such that the specific control advice in Silica Essentials may not be sufficient.

Amicus questions this statement, since it is our understanding that the good control practice set out in these sheets has not been designed to meet a specific exposure standard, and indeed is likely to achieve controls that would meet a lower standard. The statement itself is couched in terms that suggest it is open to question (“**some** industries”, “**could be** additional technical challenges”, “**may not** be sufficient”). We are not convinced by this statement at all.

The HSE continues to develop COSHH Essentials advice for controlling silica dust in a wide range of sectors. At the European level, far more sheets, based on the COSHH Essentials model, have being developed as part of discussions on a European-wide agreement on the control of respirable silica dust.

Measurability of a 0.05 mgm^{-3} standard

Amicus believes that the problems of measurement of silica dust at levels at or below 0.05 mgm^{-3} have been overstated.

The CD states that:

“Ideally, analytical methods need to be able to cope with both 4-hour and 8-hour TWA periods, given that some workplace tasks may only be a few hours in duration.”

We particularly note the use of the word “Ideally”, since standards such as these need to operate in the real world, not some ideal world that may never be achieved.

Thus even under the current situation a 0.05 mgm^{-3} standard could be enforced precisely if sampling was over 8 hours. In practice, of course, exposures only considerably in excess of any exposure standard are likely to be subject to enforcement activity by HSE.

Amicus has also seen a number of scientific papers that refer to measurement of silica dust levels well below 0.05 mgm^{-3} .

In addition, we are aware that the dust monitoring strategy recommended by Eurosil, the European silica employers body, and now proposed as part of a European Social Dialogue Agreement, involves sampling over 7-9 hours. This is a standard that is followed throughout the European silica producing and using industries.

Comparison of exposure standards around the world for respirable silica dust, show considerable variation (though the current UK standard of 0.3 mgm^{-3} is exceptionally high)

This table produced by Eurosil, the official body representing the European industrial silica producers, appears on the IMA-Europe website

Table of Occupational Exposure Limit values

The following table shows the Occupational Exposure Limits (OEL) for quartz, cristobalite and tridymite in application in Europe and in some other countries.

Country	Occupational Exposure Limit (OEL) Name	Adopted by	Quartz (q)	Cristobalite (c)	Tridymite (t)
Australia	National Exposure Standard	Worksafe Australia, National Occupational Health & Safety Commission	0.2	0.1	
Austria	Maximalen ArbeitsplatzKonzentration	Bundesministerium für Arbeit und Soziales	0.15	0.15	0.15
Belgium		Ministère de l'Emploi et du Travail	0.1	0.05	0.05
Denmark	Threshold Limit Value	Direktoratet for Arbejdstilsynet	0.1	0.05	0.05
Finland	Occupational Exposure Standard	National Board of Labour Protection	0.2	0.1	0.1
France	Empoussiérage de référence	Ministère de l'Industrie (RGIE)	5 or 25k/Q		
	Valeur limite de Moyenne d'Exposition	Ministère du Travail	0.1	0.05	0.05
Germany	Maximalen ArbeitsplatzKonzentration	Grenzwerte in der Luft am Arbeitsplatz	0.15	0.15	0.15
Greece		Legislation for mining activities	0.1	0.05	0.05
Ireland		2001 Code of Practice for the Safety, Health & Welfare at Work (CoP)	0.05	0.4	0.4
Italy	Threshold Limit Value	Associazione Italiana Degli Igienisti Industriali	0.05	0.05	0.05
Luxembourg	Maximalen ArbeitsplatzKonzentration	Grenzwerte in der Luft am Arbeitsplatz	0.15	0.15	0.15
Netherlands	Maximaal Aanvaarde Concentratie	Ministerie van Sociale Zaken en Werkgelegenheid	0.075	0.075	0.075
Norway	Threshold Limit Value	Direktoratet for Arbejdstilsynet	0.1	0.05	0.05
Portugal	Threshold Limit Value	Instituto Portugues da Qualidade, Higiene & Safety at Workplace	0.1	0.05	0.05
Spain	Valores Limites	Instituto Nacional de Seguridad e Higiene en el Trabajo	0.1		
		Instrucciones de Técnicas Complementarias (ITC)	0.1	0.05	0.05
		Reglamento General de Normas Basicas de Seguridad Minera	5 or 25k/Q		
Sweden		National Board of Occupational Safety and Health	0.1	0.05	0.05
Switzerland	Valeur limite de Moyenne d'Exposition		0.15	0.15	0.15
United Kingdom	Maximum Exposure Limit	Health & Safety Executive	0.3	0.3	0.3
	Occupational Exposure Standard				
USA	Permissible Exposure Limit	Occupational Safety & Health Administration	10/(%SiO ₂ +2)	PEL (Quartz)/2	PEL (Quartz)/2
	Threshold Limit Value	American Conference of Governmental Industrial Hygienists	0.05	0.05	0.05

This shows that several countries have already set exposure limits below 0.1 mgm^{-3} , (using the Quartz standard) i.e. Ireland, Italy, Netherlands, and ACGIH in the USA.

We understand that in addition, the German MAK of 0.15 mgm^{-3} has currently been withdrawn.

All of this leads us to believe that there is no logical reason on measurability grounds for rejecting a limit of less than 0.1 mgm^{-3} .

Bud Hudspith
4th March, 2006

Response Form

Control of Substances Hazardous to Health Regulations 2002 (as amended 2005)

Proposal for a Workplace Exposure Limit for Respirable Crystalline Silica

We would like you to tell us what you think about the proposals set out in this consultative document. The proposals are summarised below in this reply form that you may wish to copy or tear out and use. Please add extra sheets if you wish.

Name of company or organisation

Amicus the union

Name of individual

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Question Comment

1. Do you agree with the proposal for a WEL for respirable crystalline silica of 0.1 mg.m⁻³ (8-hour TWA)?

No

If you disagree, please explain why.

Amicus supports the setting of a WEL for silica of 0.05 mgm⁻³.

We do not believe there are significant measurement problems concerning this limit.

2. In your workplace (please describe), do you consider it would be reasonably practicable to comply with a WEL of 0.1 mg.m⁻³ (8-hour TWA)?

Not applicable, but Amicus believes a WEL of 0.05 mgm^{-3} is reasonably practicable. Any sectors, or specific tasks, that cannot meet the WEL should be given special assistance.

3. Which version of the RIA have you read – the summary (in Annex 3 of this Consultative Document), or the full RIA (see paragraph 28 above for details of how to obtain the full RIA)?

Full version

4. Do you agree with the exposure information presented in the RIA?

Not applicable

If you disagree, or can provide further information concerning the levels of exposure that can be reasonably achieved in your industry sector, then please provide the relevant evidence.

Not applicable

5. In your view how well does this consultation document represent the different policy issues involved in this matter? Tick one box.

- Very well
- Well**
- Not well
- Poorly

6. Is there anything you particularly liked or disliked about this consultation? (please add extra sheets if you wish)

The whole CD overstates the measurement problems. The response form oversimplifies the issues.

Please return this response form to:

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