

Designers & Architects

Silica is present in every concrete block and Respirable Crystalline Silica Dust (RCS) is tiny dust particles which are generated by the action of cutting into concrete blocks.

When inhaled, these tiny particles can go deep into the lungs and cause Silicosis which eventually can develop into Lung Cancer, COPD, Kidney Failure among other illnesses.

Construction workers make up approximately 75% of all people who are exposed to RCS.

Respirable Crystalline Silica is referred to as the new ASBESTOS and the HSE has estimates that for every single death as a result of a construction accident, approximately 100 people die as a result of exposure to Respirable Crystalline Silica.

Studies have shown, even when using the best extraction systems etc. the Occupational Exposure Limit Values set out by the European Commission are typically not achieved.

- *) The Number one sector for RCS exposure to RCS is construction.
- *) The Number one creator of RCS is cutting into concrete.
- *) The number one reason for cutting into blocks is for chasing purposes.
- *) The Number one solution recommended by European Commission and detailed in EC Directives is for **Designers and Architects to DESIGN OUT this problem** by using products that do not need to be cut.
- *) We believe the perfect solution to solve this major health hazard is to use Chased Blocks.

European Commission Guidance On Workers Exposure To Respirable Crystalline Silica For National Labour Inspectors

Page 8 “Hierarchy Of Controls” – 1st Line

Design the appropriate work processes, such as using pre-cut materials or systems that RCS is no longer necessary.

Page 10 – Eliminate or Substitute – 1st Line

Has the employer considered elimination or substitution e.g. use of pre-cut materials so less cutting is required.

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“Substitution should be encouraged when possible, using building materials so less cutting is needed.

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Water suppression and LEV systems are not fully reliable and even when functioning effectively they do not eliminate all silica dust.

Page 25 & 26.

Cutting & Chasing Blocks is High Risk.

No.1 recommendation is to “Design Out Risks” and

“Limit the number of cuts during design or use products that do not need chasing”.

[Health & Safety Guide To Safety 2005](#)

Page 22. - Section.16.

General duties of Designers, Manufactures, Importers & Suppliers.

*) The article is designed and constructed so that it can be used safely and without risk to health at work.

*) A person who designs or manufactures an article for use at work must carry out the necessary research with a view as far as reasonably practicable eliminate or minimise any risks to health. "Reasonably practicable" is now revised to "Technically Possible"
This is repeated in the "Irish Safety, Health And Welfare Act 2005"

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Duties to be compiled by persons who commission or procure construction work should ensure that the project is designed and is capable of being constructed without risk to health.

EU DIRECTIVE 2004/37/EC (Carcinogens or Mutagens at work)

[Irish Safety And Health Act 2005](#)

Design the work processes to minimise the release of carcinogens.

Section 16. (page 25) Manufactures, imports or supplies any article for use at work shall:

*) Ensure the article, so far as reasonable practicable to "be safe and without risk to health when properly used by a person at a place of work".

*) Ensure the article undergoes appropriate levels of testing to ensure compliance.

HSA – 2021 CODE OF PRACTICE FOR SAFETY, HEALTH & WELFARE AT WORK

Page 4.

"In practice, exposure levels should be maintained well below the "OELV" and should always be as low as "Reasonably Achievable". This is particularly important for carcinogens.

Page 16.

"Silica, Crystalline Respirable Dust is listed as a Carcinogen.

[EU DIRECTIVE 2004/37/EC \(Carcinogens or Mutagens at work\)](#)

[& Amended EU DIRECTIVE 2017/2398](#)

"Workers exposure to carcinogens must be prevented.

The employer shall reduce the use of carcinogens by replacing them with substances that is not dangerous.

Where "Technically Possible" exposure should be reduced to a minimum.

The employer shall

*) Design the work processes to minimise the substance release.

*) Limit the quantities of carcinogens.

*) Keep the number of workers exposed to a minimum.

*) The maximum OEL limit "MUST NOT BE EXCEEDED"

(section 2. – 2017/2398 EC DIRECTIVE).

Why Use Chased Blocks ?

Chased blocks is a simple concept, but is a very effective all round solution to greatly reducing workers exposure to RCS in a construction workplace and in turn should dramatically reduce the number of the many deaths from lung cancer caused by exposure to RCS in construction.

These blocks eliminate the Number 1. cause of RCS creation and exposure to construction workers which is cutting concrete blocks for chasing purposes.

Chased Blocks have been developed with one goal in mind which has been documented many times in European and National Guidance and directives as being the Number 1. Solution to this problem.

That is to “Prevent” and “Designing Out” the problem – use products that do not need to be cut..

This is exactly what Chased Blocks does.

It also satisfies the socioeconomic requirements between block manufactures and contractors as the overall economic costs should not increase. We estimate the costs of the Chased Blocks will be approximately 20c euro more expensive than the standard traditional blocks, however the contractors will save at least the difference by not having to have the walls cut when chasing.

When using Chased Blocks, the cutting element which is the main cause of Respirable Crystalline Silica is removed from the chasing process.

For this product to work successfully, the complete interior of a property should to be built using Chased Blocks.

As we know the position of plug sockets etc. are often not planned before the property is built and even when they are planned in advance, there are changes required at later stages.

When the inside of a property is built using Chased Blocks, sets of lines are automatically created on from the floor to the ceiling on both sides of the wall.

These sets of lines are available approximately every 20cm and then between these lines can be punched as required for chasing purposes without the need for cutting into concrete blocks.

The chase width is approximately 6cm wide x 2.5cm deep – capable of taking a double set of standard conduit.

This 6cm width also allows for left to right flexibility when positioning the sockets or switches.

Crucially there are no lines back to back as this is not permitted for the installation of electrical cables.

Chased Blocks have already being manufactured and tested for strength and size.

The blocks comply with both tests and indeed have surpassed the strength of the standard blocks.

Results are available on our website www.chasedblocks.com.

Chased Blocks has been invented in Ireland by Danny Morning and we have the following protections filed on this product.

IRISH Patent Application: No.S2002.0034

U.K. Patent Application: No.2111605.8

(Patent Numbers for Europe, United States etc. will follow in due course)

12 Registered Community Designs which are already GRANTED.

These patent specifications, design registers are available on our website www.chasedblocks.com

Other benefits when using Chased Blocks.

- *) As these blocks are manufactured on their long side and there is only 22 blocks per bail instead of the normal bail size of 44 blocks. They are much safer when working on scaffolding because the centre of gravity is much lower which means when the bail of blocks are opened they are much less likely to spill off the edge of the scaffolding.
- *) Once the first row of blocks are in position, then the lines on the blocks will act as a guide for the block layer.
- *) When plastering, the plaster will have a better grip on the wall because of the it being held by the 5mm slit in the blocks.