

NEPSI PROPAGATION «Seminar on Stone »

Manufacturing, processing and installing of natural and artificial stones

Addressing the health risks and the good practices for working safely

12 February 2026

Hilton Brussels Grand Place, Carrefour de l'Europe 3 – 1000 Brussels - Belgium

Translation English, French and Spanish

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Report

Annex I: Agenda

Annex II: List of signatories

This seminar of the European **NEPSI Propagation** project took place in Brussels, Belgium, on 12 February 2026. Around 60 participants attended, representing a wide range of sectors. These included NEPSI signatory social partners and their member organisations, representatives of the European Commission, national authorities responsible for occupational health and safety, specialised institutes, as well as scientific researchers and experts.

The seminar opened with welcome addresses by the two co-chairs of the NEPSI Council, **Sylvain Lefebvre** and **Florence Lumen**, who recalled the objectives of the event: to improve understanding of occupational health and safety risks in the affected sectors, to enhance awareness of existing initiatives to protect workers' health, and to explore how NEPSI can contribute further to improving the situation.

Presentation of NEPSI: Framework and Objectives

NEPSI is a European social dialogue agreement, launched in 2006, aimed at protecting workers from risks related to respirable crystalline silica (RCS) generated by industrial processes.

It brings together social partners from 18 industrial sectors that are signatories to the agreement (see Annex II).

NEPSI is based on:

- a Good Practice Guide (available in 22 languages);
- Task Sheets;
- regular site reporting, enabling the monitoring of 12 key performance indicators.

The central message is that silicosis is a preventable disease, provided that good practices are applied consistently. NEPSI also seeks to go beyond legislation alone by promoting practical implementation and continuous improvement through sectoral cooperation and social dialogue.



1. « NEPSI Propagation » Project (Sylvain Lefebvre)

Sylvain Lefebvre, co-chair of NEPSI, began by presenting the new 'NEPSI Propagation' project, which is funded by the European Commission. The main aim of this project is to boost the dissemination of NEPSI tools at national level, with a particular focus on small and medium-sized enterprises and micro-enterprises, which are often difficult to reach through traditional prevention schemes.

The project notably involves the development and expansion of training modules, particularly via online platforms, as well as the organisation of five national seminars in various Member States. Particular importance is attached to social dialogue at national level, and to the collection and updating of existing best practices. It was also noted that a major upcoming event will be the celebration of NEPSI's twentieth anniversary, scheduled for 14 October 2026.

2. European Commission Intervention (DG EMPL / H&S Unit) – Arthur Furtado

The European Commission, represented by Mr Artur Furtado, expressed strong recognition of NEPSI as a successful example of European social dialogue. The intervention recalled the applicable regulatory framework, in particular the Directive on carcinogens, mutagens and reprotoxic substances at work (CMRD), which has already undergone several revisions, with a sixth revision under discussion and a seventh under preparation.

Work processes generating respirable crystalline silica are included in the Directive, and it is estimated that around five million workers are exposed to RCS in the European Union. The measures implemented under this framework could help prevent up to 100,000 deaths over a fifty-year period.

The Commission highlighted the importance of tripartism, involving employers, workers and States, and outlined several key future challenges, including the improvement of prevention tools (including digital tools), support for the green and digital transitions, regulatory simplification without compromising safety, and better consideration of small enterprises as well as migrant and young workers.

3. Natural Stone Sector (EuroRoc – Gerd Merck)

Mr **Gerd Merck** presented the natural stone sector, recalling that stone has been used for millennia and is generally extracted locally, with a relatively limited environmental impact. The sector is characterised by a wide variety of materials, such as granite, marble, limestone, slate and quartzite,

and numerous applications, ranging from buildings and facades to flooring, kitchens and the restoration of architectural heritage.

It was emphasised that the sector has significantly modernised its techniques over recent decades, notably through reduced use of explosives, increased use of water-assisted cutting and improved dust management. Nevertheless, respirable crystalline silica remains a major issue, particularly during the cutting of quartz-rich stones. In this context, NEPSI is viewed as an essential framework for sharing good practices and promoting continuous improvement in prevention.

4. Engineered stone (ASTA Worldwide) – Beatrice Barbiero



Ms. **Beatrice Barbiero** presented **ASTA (Agglomerated Stone Manufacturers Association)**, the international association of artificial stone producers. Occupational health and safety is the highest priority for the sector. Key commitments include active participation in NEPSI, a voluntary initiative (“Handle Stones with Care”), and contributions to international standardisation work (ISO TC 328).

The sector is experiencing strong global growth, with a market estimated at around USD 30 billion. ASTA Worldwide represents six European producers employing approximately 1,500 workers. The materials concerned are composites made of aggregates, binders and additives, with highly variable levels of crystalline silica depending on the product:

- engineered quartz: up to 90% silica;
- new mineral surfaces: reduced or low silica content.

5. Artificial Stones Surfaces (ASTA Worldwide) – David Pérez Foullerat

Mr. **David Pérez Foullerat** clarified the different families of artificial stones and distinguished them from ceramics and porcelain. He highlighted the critical role of the manufacturing, cutting and finishing stages, particularly among processors and installers. The highest-risk operations are dry work, finishing activities and tasks carried out in poorly equipped workshops.

The importance of effective control measures was strongly underlined, including the use of water, local exhaust ventilation, appropriate equipment and specialised training.

6. Artificial Stone Silicosis: a UK case series – Dr. Johanna Feary

Dr **Johanna Feary**, from the London Imperial College, delivered a particularly alarming clinical assessment. Globally, a study has identified more than 6,000 cases across 12 countries. Accelerated and severe forms of silicosis have been observed in young workers, often aged between 20 and 40, with sometimes very short latency periods and rapid progression to severe conditions such as progressive massive fibrosis. Cases of death and lung transplantation have been documented.



The affected workers are predominantly migrant workers, often socially integrated and regularly employed, but working in micro-enterprises or informal or semi-informal workshops. Working conditions frequently include dry cutting, lack of effective extraction, inadequate or absent personal protective equipment, and absence of medical surveillance.

It was recalled that there is no curative treatment for silicosis, and that stopping exposure does not necessarily halt disease progression. Lung transplantation remains a last-resort option with limited survival and represents an unsatisfactory response for young workers. Dr Feary also noted that silicosis is not the only disease linked to exposure to respirable crystalline silica (see slide 9).

The social impact is also significant, with frequent job losses, inadequate compensation mechanisms and high risks of precarity and social isolation.

A key point widely shared during the seminar concerns case detection. The absence of declared cases in some countries does not indicate the absence of disease, but rather the absence of active screening and targeted medical surveillance. Countries that have implemented specific silicosis screening programmes, such as Australia, Spain or the UK, report a substantial increase in identified cases.

She emphasised the importance of a comprehensive approach including:

- awareness-raising among workers, employers, industry and health professionals;
- a strong focus on prevention measures (in the absence of curative treatment);
- appropriate monitoring of RCS concentrations;
- risk assessments and exposure monitoring;
- assessment of low-silica alternatives;
- improved medical surveillance for early detection;
- development of effective treatments.

7. Introduction: Health Impact and Regulatory Responses (IndustriALL Europe) – Maike Niggemann



From the trade union perspective, the re-emergence of a historical occupational disease disproportionately affecting young workers represents a major concern. Available data remain fragmented and difficult to compare, but studies indicate very high prevalence rates in certain highly exposed groups.

Strong regulatory responses have emerged in some regions, such as the full ban on high-silica engineered stone in Australia or the ban on dry cutting processes in California, combined with mandatory certified training requirements. Some studies show 20–30% of workers affected in certain exposed groups.

At EU level, a revision of the occupational exposure limit (OEL) is ongoing.

Scenarios under consideration include:

- 0.1 mg/m³
- 0.075 mg/m³
- 0.05 mg/m³
- 0.035 mg/m³
- 0.02 mg/m³

9. Regulatory Management (Regulatory Management Options Analysis) – (RIVM) – Wendy Tijssen

The analysis conducted in the Netherlands highlighted a serious health risk for workers exposed to RCS, particularly in small structures and workshops. Exposure levels measured on site may significantly exceed existing limit values, especially during stone processing and finishing activities.

Based on this analysis, Dutch authorities issued several key recommendations in 2022. These include strengthening risk awareness among employers and workers, improving technical control measures and reinforcing medical surveillance for exposed workers. This approach combines better



enforcement of existing legislation with specific requirements such as mandatory training, product labelling and clear, accessible information on materials used.

Recent developments in the Netherlands confirm the relevance of this approach. Targeted inspections show that while technical controls are often in place, knowledge and understanding of the risk remain insufficient in many workshops.

10. Plenary Debate

- Discussions highlighted a very heterogeneous situation among employers. In some cases, ignorance of the hazard is genuine, while in others, the risk is well understood. Smaller companies face significant economic constraints, and investments to eliminate dust at source can be costly. Supporting these companies in identifying feasible control measures is therefore essential.



- Worker vulnerability was another key issue. Many workers struggle to refuse dangerous working conditions, out of loyalty to their employer or fear of losing their job. This is often compounded by a lack of clear, understandable and accessible information on risks and protective measures.

- A strong consensus emerged on the central role of medical surveillance. Participants stressed the need for early identification of exposed workers

and reinforced targeted medical examinations. It was recalled that simple chest X-rays are often insufficient and that more sensitive examinations, such as CT scans, allow earlier detection.

- Participants also underlined the need to progress on the recognition of occupational diseases linked to silica exposure.



11. The Spanish strategy for the prevention of occupational exposure to respirable crystalline silica dust. (INSST) – Cristina Lopez Salinas



The Spanish approach presented by Ms Salinas from INSST highlighted an increase in silicosis cases. The most affected sector is the handling of non-metallic mineral products, accounting for around 60% of declared cases, including stone cutting, shaping and finishing activities.

The Spanish authorities also stressed the absence of a harmonised European database enabling comparisons between national situations. Recognition criteria and disease reporting systems vary widely across countries.

Data from the European survey on workers' exposure to carcinogenic risk factors indicate that around 8.4% of workers may be exposed to respirable crystalline silica. Main causes of high exposure include poor cleaning methods (especially dry sweeping), work on artificial stone, and insufficient or absent protective measures. Nearly half of exposed workers wear no protection at all, raising questions about employer responsibilities.

In response, Spain has implemented a structured strategy. The country has a national exposure limit of 0.05 mg/m³, stricter than the EU limit, and recognises RCS as a carcinogenic agent. A national technical guide was published in 2023, and a multi-annual national strategy was developed, based on a tripartite working group, a planned awareness campaign in 2026, multilingual technical materials and the development of standardised exposure measurement methods.

12. Substitution et industrial innovation – Cosentino – David Pérez Foullerat & Paz Carreras Segui

The Cosentino example illustrates an industrial paradigm shift initiated in 2017, with a strategic decision to drastically reduce, and ultimately almost eliminate, crystalline silica from materials.

This approach is based on clear scientific recognition that crystalline silica cannot be rendered safe through simple encapsulation in the artificial stone, and that substitution is the only credible long-term solution. The results achieved are significant. The company has progressively developed materials containing less than 50%, then less than 40%, then less than 10%, and finally less than 1% crystalline silica.

Independent studies conducted by laboratories and universities have shown silica emissions up to 30 times lower than granite during cutting, with no increase in toxicity observed in vitro or in vivo and no significant emissions of volatile organic compounds or metals related to the material.

Risk communication is central to this strategy, with mandatory physical marking on all slabs indicating silica content, QR codes giving access to safety data sheets, good practice guides, NEPSI resources and information available in over 120 languages. Regular company information campaigns reach several million contacts in Cosentino's database.

13. Organisational Levers – Trade Union Feedback (Ceramics Industry, Spain), Francisco Casas Lozano

A trade union case study from the Spanish ceramics industry showed that the most effective prevention often relies on process modification. The shift from dry polishing to wet polishing before firing enabled near-total elimination of hazardous dust and the disappearance of new silicosis cases over several decades.



The hierarchy of prevention measures is essential, from replacement (substitution) and process modification to personal protective equipment as a last resort. Management commitment and targeted, regular medical surveillance are key success factors.

Workers diagnosed with silicosis were reassigned to positions without exposure. Employers, including small companies, were called upon to actively engage in transformation processes aimed at improving working conditions and reducing occupational exposure. It was reiterated that no compromise can be made on worker health and safety.

14. Worktop Fabricators Federation (WFF – Royaume-Uni) – Nigel Fletcher

The perspective from the UK worktop fabricators highlighted three major obstacles to prevention. The



first is complacency, reflected in the belief that current practices are acceptable because they have always been that way. The second is ignorance, among workers as well as specifiers such as kitchen designers or end consumers.

The third obstacle is unfair competition and “health dumping”, linked to informal operators or dry cutting carried out in private homes.

These findings underline that the problem lies not only with the material itself, but with downstream practices along the value chain, particularly during fabrication and installation. There is a clear need for strengthened training, certification and accountability of specifiers and clients.

15. Construction Sector – European Perspective (EFBWW) – Giuseppe Perretti

From the perspective of the European Federation of Building and Woodworkers, construction is characterised by cumulative and diffuse exposure to RCS. Two out of five exposed workers are active in the construction sector. Silica must be considered a carcinogen with no safe threshold.



The European trade union position prioritises substitution where feasible and supports strict exposure limits, while recalling that compliance with a limit does not eliminate risk. Practical solutions such as task mapping using a “traffic-light” system, low-emission techniques, source extraction and bans on dry sweeping are key prevention measures.

Round Table and Closing (managed by Sophie Grenade, industriAll Europe)

The final round table shifted the discussion from diagnosis to action. Five experts from different backgrounds addressed the question: *Which elements are currently missing to effectively raise awareness, support regulatory compliance and improve control of RCS exposure in stone manufacturing and use sectors?*

Panelists highlighted the need for product- and task-specific training, stronger regulatory compliance across the supply chain, and greater professionalisation of the sector. Discussions emphasised the importance of concrete, relatable messages adapted to the realities of small structures, in multiple languages, and the need to innovate communication channels to reach the hardest-to-reach audiences.



Three non-negotiable messages were identified for any training:

- every exposure counts, even short ones;
- silica is a “silent killer” with cumulative and irreversible effects;
- dust must neither spread nor be brought home.

Reaching the “unreachable” is the challenge



Large companies are largely already convinced; the main challenge lies with micro-enterprises struggling with day-to-day survival. New contact channels are therefore needed, such as:

- H&S playing cards;
- community centres;
- targeted posters;
- QR codes on tools and packaging;
- messages in transit areas, etc.
- early training, integrating RCS risks into initial education

(students/apprentices), using real testimonials.

Closing Remarks (Florence & Sylvain)



The seminar concluded by emphasising the richness and multi-perspective nature of the discussions, the existence of solutions despite significant challenges, and the collective commitment to continue the work over the next two years, expanding the scope to additional sectors and explicitly targeting micro- and small enterprises.

Annex I: Agenda

Timing	Agenda Item
09:30	Welcome coffee
10:00 – 10:20	Welcome and introduction to NEPSI and its projects, Florence Lumen and Sylvain Lefebvre Welcome address by Artur Furtado, European Commission DG EMPL C2, Health & Safety at work
10:20 – 11:00	Introduction to natural stones and artificial stones, Gerd Merke (EUROROC), Beatrice Barbiero and David Pérez Foullerat (AstA worldwide)
11:00 – 11:45	Artificial stone silicosis: a UK case series, Johanna Feary, Imperial College London
11:45 – 12:15	Introduction to the health and regulatory situation, Maike Niggemann - industriAll Europe Regulatory Management Option Analysis of the manufacturing and high-energy operations on artificial stone, Wendy Tijssen-Caan, RIVM (Dutch National Institute for Public Health and the Environment)

Lunch Break – 12.15-13.30

<p>13.30 – 14:45</p>	<p><i>Session:</i> Prevention Programmes, R&D initiatives and Good Practices for Working Safely</p> <ul style="list-style-type: none"> • Cristina López Salinas, Instituto Nacional de Seguridad y Salud en el Trabajo • R&D efforts related to engineered stone dust inhalation risk and communication to customers, Cosentino, Paz Carreras Seguí, David Pérez Foullerat • Trade union initiatives, Francisco Casas Lozano, CCOO Industria - Spain • Promoting best practices and robust workplace health and safety standards within the surface fabrication sector, Nigel Fletcher, Worktop Fabricators Federation • Trade Union's initiatives in the construction sector, European Federation of Building and Woodworkers (EFBWW), Giuseppe Perreti
<p>14:45 – 16:00</p>	<p><i>Panel</i> with social partners, health and safety, and communication experts: how to collaborate and develop material to help awareness, enforcement and control RCS exposure in the stones manufacturers and in user industries, especially in the context of reaching the very small companies</p> <p>Moderated by Sophie Grenade, industriAll Europe</p> <ul style="list-style-type: none"> ▪ Philippe Vigneron - Centrale Générale FGTB ▪ Remko Houba, NKAL - IRAS ▪ Andy Price – NEPSI technical committee chair, SIBELCO ▪ Juli Ferguson – Leidar ▪ Nigel Fletcher – Worktop Fabricators Federation
<p>16:00 – 16:30</p>	<p>Conclusions by the NEPSI chairs</p>

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12 February 2026,
HILTON BRUSSELS GRAND PLACE

ATTENDANCE LIST

Last Name	First Name	Organisation
Barbiero	Beatrice	A.St.A. Worldwide (speaker)
Bauer	Patrick	PRO-GE
Beóthy-Fehér	Szabolcs	FTM-CGT
Callebaut	Kristof	Brachot nv
Carreras Seguí	Paz	Cosentino (speaker)
Casas Lozano	Francisco	CC.OO industria
Damm	Jean-Pierre	FO Energie et Mines
Duis	Pim	University of Utrecht
de Beaufort	Maëlle	BRETAGNE GRANITS
de Beaufort	Marc	BRETAGNE GRANITS
Doome	Roger	IMA-Europe
Ermini	Jason	Artemyn UK Ltd
Feary	Johanna	Imperial College London (speaker)
Ferguson	Juli	Leidar (panelist)
Fernández	Víctor	FICA UGT
Fletcher	Nigel	Worktop Fabricators Federation (WFF) (speaker & panelist)
Frövén	Peter	If Metall (Sweden)

Furtado	Artur	European Commission (speaker)
Gonzalez	Sofia Noelle	Euromines
Grenade	Sophie	industriAll Europe (speaker)
Guyon	Léna	FIEC
Hansen	Ina	Cerame-Unie
Herbert	Chris	Mineral Products Association
Houba	Remko	IRAS/NECORD (panelist)
Hody	Louis	IMA-Europe
Iqbal	Anam	Cement Europe
Journoud	Serge	FTM-CGT
Kedziora	Charlotte	CBGreen
Konings	Natalie	Bird & Bird (Belgium) LLP
Lefebvre	Sylvain	NEPSI Chair
López Salinas	Cristina	Instituto Nacional de Seguridad y Salud en el Trabajo (INSST) (speaker)
Lovegrove	Philip	Aggregates Europe
Lumen	Florence	NEPSI Chair, IMA- Europe
Lützenkirchen	Frank	Quarzwerke Group
Mereu	Claudio	Bird & Bird (Belgium) LLP
Merke	Gerd	Euroroc (speaker)
Mosconi	Simone	Confindustria Ceramica
Neches	Clara	IMA-Europe
Niggemann	Maike	industriAll Europe
Perez Foullerat	David	Cosentino (speaker)

Perreti	Giuseppe	EFBWW (speaker)
Price	Andy	Sibelco (panelist)
Rohm	Christoph	PRO-GE
Sala	Olivia	FEBELCEM
Saric	Admir	IMA-Europe
Segers	Joke	Diresco NV
Sieger	Johannes	Quarzwerke Gruppe
Smeets	Tomas	Diresco NV
Stael	Linde	ACV/CSC BIE
Tijssen-Caan	Wendy	RIVM (speaker)
Timmermans	Sander	NKAL
Vázquez López	Luis Javier	CC.OO industria
Verberne	Han	Jetstone
Vigneron	Philippe	ABVV/FGTB (panelist)
Westman	Mikael	Occupational hygienist Boliden mines