



Silicosis – Old Disease, New Threat

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EU-OSHA ENP Project - Silica workshop in Bilbao

A short History:



- ❖ From ancient times - use of stone as a building material
- ❖ Exposure to silica dust in marble shops, abrasive blasting, foundry work
- ❖ 1987 – Introducing a new Israeli-made artificial stone, for use especially in kitchens and bathrooms countertops
- ❖ 1989→today – the use of artificial quartz surfaces has expanded dramatically

Number of cases of silicosis reported to Safety and Health Administration

In 2009 we noted an increase in the number of reported cases of silicosis, most from marble workshops handling artificial quartz stone



3	2006
4	2007
4	2008
15	2009
22	2010
27	2011
22	2012
44	2013
63	2014
?	2015

Lawsuits against the State

About 40 lawsuits against employers and the State

In one of the first lawsuits (2010), an owner of a marble shop who got sick sued the producer of artificial quartz surfaces and the state. The district court found the owner, the producer and the state responsible, and divided responsibility as follows:

- 40% the owner
- 33% the producer of artificial quartz surfaces
- 27% the state

(Total fines: 1.4 milion euros)

The state has appealed to the high court of justice.

Source

Ceasarstone:
2 production plants
of artificial marble
surfaces
420 employees

Other
Manufacturers
of artificial
marble surfaces
– local and
import

affected

About 3,000 workers
In about 400 marble shops, mostly
small enterprises

The causes for outbreak of silicosis

- ❖ Widespread use of artificial marble – a very high concentration of crystalline silica
- ❖ Aggressive methods of processing
- ❖ Intensive occupational exposures
- ❖ Awareness! - Underestimating of risks originating in processing of artificial marble
- ❖ Inappropriate engineering or work practice controls for reducing silica dust exposures at workplaces
- ❖ Inadequate respiratory protection and poor hygiene practices
- ❖ Before 2010 the inspections were not targeted at small workshops processing artificial marble. Focusing inspection activity on marble workshops and enforcement of regulation's requirements led to referring of workers to occupational medical examination and diagnosing of silicosis.
- ❖ Latency period



Safety & Health
Administration
MINISTRY OF ECONOMY

The Safety and Health Administration

The Ministry of Economy

Responsible for the regulation of occupational safety and health related issues in Israel and, in addition regulation of :

Safety of all elevators, escalators and vertical platform lifts

Safety in all sports facilities

Use of explosives

Partner in the process of Licensing of businesses

Licensing of fuel storage, including LPG

Main Modes of Operation:

- **Inspection Visits** – In accordance to orders of priority, complaints and appeals
- **Investigations** – Especially of fatal and severe injury accidents and of occupational diseases
- **Business Licensing Activity** - Rapid response is required as per legal requirements
- **Various activity through qualified / certified bodies** - A branched complementary system that is regulated and supervised by us
- **Assistance** – For small enterprises and other sectors

The Normative Base:

The Work Safety Ordinance (New Version) – 1970

Approx. 50 regulations under the Ordinance;

Work Safety Regulations (Occupational Hygiene and Health of Workers With Hazardous Dust), 1984

- Use of improved ventilation and exhaust systems,
- Process enclosure,
- Use of wet techniques,
- Personal protection,
- Education of workers
- Periodical environmental occupational measurements of exposure
- Medical monitoring of workers' health

**Accidents and Occupational Diseases Ordinance (Notification),
1945**

Trying to solve the problem

- ✓ Enforcement campaigns, tightening demands
- ✓ Shutting down marble shops
- ✓ The Small-scale Factory Project
- ✓ Spreading the information, media campaign
- ✓ Learning from a successful experience – The Spanish National Institute of Silicosis

Enforcement campaigns

Year	Number of marble shops visited	Number of orders issued
2010	363	119
2013	498	242

By the end of 2014:

- ✓ 12 marble shops have been closed down by the authorities, 7 more in the process
- ✓ Charges issued against 9 shops

The Small-scale Factory Project

In 250 small marble shops

Survey of hazards

Environmental occupational monitoring

Informing and training



Information and warning



מינהל הבטיחות
והבריאות התעסוקתית
משרד הכלכלה



חוקים
ותקנות

שאלות
ותשובות

פיקוח ואכיפה
במפעלי שיש

בדיקות סביבתיות
תעסוקתיות

בדיקות רפואיות
לעובדים

צמצום חשיפה
לסיליקה

סכנות החשיפה
לסיליקה

מהי סיליקה?

עובדים בענף השיש - היזהרו ממחלת הסיליקוזיס!

העובדים והמעסיקים בענף השיש - משטחי קוורץ מלאכותיים, עלולים לחלות במחלה נשימתית קשה וחשוכת מרפא - סיליקוזיס. מחלה זו נובעת מחשיפה לאבק הסיליקה המשתחרר בתהליכי עיבוד השיש.

עוסקים במשטחי שיש מלאכותי - לכו להיבדק!

הקפדה על ביצוע בדיקות רפואיות עשויה להביא לגילוי המחלה בשלב מוקדם ולצמצום נזקה

מעסיקים ומנהלים - מנעו תחלואה

מעסיקי עובדים ומנהלים במפעלים לעיבוד שיש - משטחי קוורץ מלאכותיים - נדרשים:

1. לבצע לאלתר את כל השיפורים הטכנולוגיים הנדרשים להבטחת מניעת חשיפה עובדים לרמה הגבוהה מהמותר כקבוע בתקנות
2. לבצע בדיקות סביבתיות תעסוקתיות באמצעות מעבדות מוסמכות
3. לשלוח את העובדים לבדיקות רפואיות אצל רופאים תעסוקתיים ולהיבדק בעצמם



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טלפון: 03-5266455

In Spain



In Israel









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Possible measures to reduce the problem

Measure	Comments
Banning use of artificial marble	<ul style="list-style-type: none">✓ A very dramatic step✓ Almost total prevention of risk✓ Use of substitutes
Recruiting Ceasarstone to share responsibility, to create a marble shop prototype, and help to promote improvements in marble shops	<ul style="list-style-type: none">✓ Depends on Ceasarstone good will

Possible measures to reduce the problem

measure	comments
Creating a permits' regime. Sales of artificial marble will be allowed only to shops holding permits	✓ Requires legal basis and operational basis to conduct the permits' regime
Government assistance program to marble shops	✓ Requires governmental budget and operational basis
Closing down problematic shops	✓ Requires dealing with the legal aspects ✓ Finding Occupational solutions to workers who are going to lose their jobs

Permits' regime – main conditions

- ❖ Signing an agreement with the regulator
- ❖ Use of technical solutions:
 - ❖ Use of CNC machines
 - ❖ Pneumatic tools, proper use of water in all processes
 - ❖ Ventilation and local exhaust systems
- ❖ Structural and physical conditions:
 - ❖ Showers
 - ❖ Taking care of work clothes
 - ❖ Dining area
- ❖ Environmental-occupational measurements of exposure
- ❖ Medical monitoring of workers' health
- ❖ Personal protective equipment

Thank you for your kind
attention