

## EXPOSURE TO CRYSTALLINE SILICA: PUBLISHED THE ENGLISH VERSION OF THE “2000-2019 REPORT”

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Available online on the Institute’s website, now also in English, the report collects measurements of personal exposure to respirable crystalline silica covering a period of 20 years. The measurements were carried out by INAIL, the National Institute for Insurance against Accidents at Work, in workplaces throughout the whole national territory. The Silica Exposure Database also includes data from static samples of respirable dust and bulk sample (quartz content in raw materials, rock fragments, industrial process sludge and dust settled on workplace surfaces). The collected data provide an updated and comprehensive picture of occupational exposure to respirable crystalline silica and dust in Italy, by production activity and job title.

The Report describes and shows the data collected into the INAIL Silica Exposure Database, a Business Intelligence tool created by the INAIL Technical Advisory Department for Risk Assessment and Prevention (CONTARP) in collaboration with the Directorate for Digital Organization (DCOD). The database, containing the data of over 8000 samples, is freely accessible at: <https://www.inail.it/cs/internet/attivita/prevenzione-e-sicurezza/conoscere-il-rischio/banca-dati-esposizione-silice.html>

The most valuable data comes from personal measurements, which best represent the exposure profiles of those workers engaged in processes where materials containing crystalline silica are handled. Nearly 90% of the 8028 samples, collected in 1041 companies, come from personal samplings. The personal exposure measurements collected in the database have been processed using statistical methods typical of industrial hygiene. The results support the assumption that the sets of data for groups of workers that carry out similar tasks follow lognormal distribution. On this basis, the exposure profiles of 238 job titles have been estimated and represented in lognormal probability diagrams.

It is hoped that the interpretation of the measurement data presented in this Report will increase awareness and understanding of the potential health risks associated with exposure to crystalline silica, and will be used as a tool to improve its risk assessment, to develop evidence-based prevention programs and policies and for statistical modelling in epidemiologic research.

- Silica exposure Database Report 2000-2019

The adverse health effects and ubiquitous nature of crystalline silica make the issue of occupational exposure to this substance a topical one, despite the evolution of work scenarios over the years.