
Chemical Agents Exposure in the Glass Industry: assessment and main issues

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Abstract

The chemical agents workplace assessment and evaluation in the glass industry is one of the activities that SSV currently carries out: the aim is to investigate the exposure of the workers to the main chemical agents, assess the related risk and define possible corrective actions.

The risk of exposure is mainly related to the type of raw materials used in the production, the type of process applied, the type of protection system adopted and finally the type of classification available for the specific substance. Such risk assessment is an important step and requires a deep knowledge of the process workflow and related activities.

The main chemical agents that need to be analysed are: respirable crystalline silica (sand); hydrochloric acid and MBTC (hot end); Polycyclic Aromatic Hydrocarbons (forming), Soluble Nickel (mould soldering), Refractory Ceramic Fibres (insulation), etc. To assess the risk of exposure of these chemicals different methodologies can be used: such methods are not always the same and can change country by country.

The introduction of the REACH Regulation is still increasing the framework complexity; in fact the risk assessment has not only to abide by the CAD (Chemical Agent Directive) and CMD (Carcinogenic Mutagen Directive), but also the Exposure Scenarios defined by the supplier for the specific application.

The aim of the presentation is to provide an overview of the main pollutants present in the workplace of the glass industry and the relative methodologies applicable for their characterizations. Specific cases will be discussed, such as Respirable Crystalline Silica, MTBE, soluble nickel. Finally an investigation of the main problem link to the Exposure Scenario under the REACH Regulation will be analyzed.

Keywords: glass

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