

Workers' Prevention from Occupational Chemical Exposures during Container Handling

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Abstract : Volatile chemicals that accumulate and release from freight containers constitute significant health risks. Fumigation to prevent spread of pests and off-gassing of freight are sources of hazardous chemicals. The aim of our study was to investigate the regulation and practice of container handling with focus on preventive measures applied against chemical exposures in Denmark. A comprehensive systematic search of scientific literature and organizational domains of international and Danish regulatory bodies was performed to explore regulations related to safe work with transport containers. The practice of container work was investigated in a series of semi-structured interviews with managers and health and safety representatives of organizations that handle transport containers. Although there are several international and national regulations and local safety instructions that relate to container handling, the provided information is not specific or up-to-date enough to conduct safe practice in many aspects. The interviewees estimate high frequency of containers with chemical exposure and deem that they can potentially damage health, although recognizable health effects are rare. Knowledge is limited about the chemicals and most of them cannot be measured by available devices. Typical preventive measures are passive ventilation and personal protective equipment but their use is not consistent and may not provide adequate protection. Hazardous chemicals are frequently present in transport containers; however, managers, workers and even occupational health professionals have limited knowledge about the problem. Detailed risk assessment and specific instructions on risk management are needed to provide safe conditions for work with containers.

Keywords : chemical exposure, fumigation, occupational health and safety regulation, transport container

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