Construction Workers and Nanotechnology Awareness

Nanotechnology: Assessing Awareness and Training Needs Among California Construction Trades

Laura Boatman and Debra Chaplan. CPWR Report, May 2018.

Overview
A growing number of construction products incorporate engineered nanoparticles, but little is known about their long-term health effects on exposed workers. The study explored the current understanding and use of nanotechnology applications in heavy industrial/commercial construction among union leaders, apprenticeship program staff and construction contractors. Researchers surveyed 253 contacts representing 24 construction crafts to learn about their knowledge, attitudes and beliefs concerning nano-enabled construction products and about existing health and safety training addressing nanotechnology in construction. Researchers then conducted 21 follow-up interviews with survey respondents and 5 key interviews with California state agency employees.

Key Findings
- Study Participants knew very little about nanotechnology in construction. Nearly one in five survey respondents said they had never heard of “nanotechnology” and “nanoparticles.” Only 25% were aware of their use in construction materials.
- Construction workers are being exposed to nano-enabled construction products without knowing it. When study participants were shown a list of nano-enabled construction products from CPWR’s eLCOSH NANO Inventory, 44% found products they recognized or used on the job.
- Construction workers are not being trained about nanomaterials. Only 2% of the survey participants had received training regarding nanomaterials.
- Study Participants wanted to learn more about nanomaterials and construction safety and health. The level of interest generated by the survey surprised the research team, which received more than twice as many survey responses as anticipated. Among respondents aware of nanotechnology, 75% wanted new training materials on the topic.

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