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Pulmonary Injury Associated With a Spray Application of a Water-Based Waterproofing Product: A Case Study

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Ten workers suffered from respiratory complaints after spray impregnation of hardwood furniture with a waterproofing product that contained a fluorinated acrylate copolymer in an aqueous suspension. One liter of the product was sprayed during 4 min inside a wood workshop. A worker, who entered the workshop 3 h after the impregnation, was hospitalized and a severe chemical pneumonitis was diagnosed. On the following morning, 15 h after the impregnation, nine workers in an adjacent mail sorting center in the same building experienced the following respiratory symptoms: dry cough, chest tightness and sub-ternal chest pain. No other sources of causative exposure could be identified. The worker who developed chemical pneumonitis was a smoker. We hypothesize that rolling and smoking cigarettes contaminated with fluoropolymer was causative. The respiratory symptoms in the 9 workers exposed 15 hours after the spray event may have been caused by resuspension of particles that had been earlier deposited.