P43

THE USE OF NANO-ENABLED PRODUCTS IN DUTCH INDUSTRIAL SECTORS

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10.1136/oemed-2011-100382.257

Objectives We aimed to investigate the penetration of nano products in Dutch industrial sectors and the working conditions under which these products are used. The focus was on sectors producing nano-enabled products, and the application of ready-to-use nano end products.

Methods An inventory of applications of nano products was made based on the literature and expert elicitation. Sectors were linked to the applications. For each sector the sector organisation and a random sample of 20 individual companies were contacted by telephone. In addition companies using nano products were actively searched. Structured interviews on the use of nano products and working conditions were administered to the branch organisation and each company using nano products.

Results The major application of nanomaterial was in coatings. Fourteen sectors were identified to be relevant. Preliminary results show that considerable penetration (>10% of companies contacted) of nano products has occurred in shoe repair shops (4/20), car body repair shops (3/20), production of coatings and inks (4/20), tire manufacturing (1/1). The awareness of nano products was low, especially among appliers of nano products. In general no special information, training or guidelines on control measures use was available.

Conclusions Nano products are applied in diverse industrial sectors. Because of the limited awareness among especially the appliers, the penetration of nano products is probably underestimated. This study will serve as a basis for assessing the population 'at risk' and subsequent quantitative exposure assessments and health surveys that are currently planned in the Netherlands.