



# **Use of dangerous chemicals at the work place**

## **SURVEY REPORT SUMMARY**

Commissioned by:  
Ministry of Social Affairs

Conducted by: AS Emor

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## **Method**

Data collection for the survey „Use of dangerous chemicals at the work place“, commissioned by the Ministry of Social Affairs, was carried out in two stages in May and June, 2012: 1) telephone interviews among Estonian companies with at least 5 employees (Computer Assisted Telephone Interviewing), 2) online interviews with handlers of dangerous chemicals (Computer Assisted Web Interviewing). The sample of the first phase of the study was representative of Estonian companies, including 1,670 respondents. During the course of telephone interviews companies' contact with chemicals and dangerous chemicals was determined. All handlers of dangerous chemicals (including handlers of nanomaterials) who were willing to participate in the following stage of the survey were sent a questionnaire via e-mail. 247 companies handling dangerous chemicals participated in the online survey. In case of both questionnaires we asked the respondent to be the person fulfilling the duties of the working environment specialist.

## **Spread of dangerous chemicals**

59% of respondents representing an Estonian company with at least 5 employees mentioned during the telephone interview that their employees come into contact with chemicals during work-related tasks and 30% mentioned coming into contact with dangerous chemicals (including also nanomaterials). When we expand the results to all companies belonging to the survey universe, then from 10,802 Estonian companies with at least five employees in approximately 3,240 employees come into contact with dangerous chemicals in their work. The bigger the employer, the bigger the share of those handling dangerous chemicals – approximately one fifth of companies with 5-9 employees and more than half of companies with at least 50 employees.

Among companies that come into contact with dangerous chemicals and that responded to the online questionnaires, the spread of CMR handling is 18% and that of nanomaterials – 3%. In case of telephone as well as online interviews, there was approximately one fifth of respondents who couldn't say if their company handles CMRs and nanomaterials or not.

The sample for online questionnaire included total of 45 CMR handlers. There are more of them among larger companies – handling the aforementioned substances is mentioned by slightly more than one tenth of companies with 5-9 and 10-49 employees and almost one third of companies with at least 250 employees. A bit more CMR handlers can be found in fields of work: manufacturing of metals or metal products; agriculture, forestry or fishery products; wholesale and retail trade.

There were a total of 8 handlers of nanomaterials included in the sample of companies handling dangerous chemicals. The companies that mention handling of nanomaterials operate in the following fields: healthcare or social welfare, lodging or catering, construction, administrative and support activities, other

services. Handling of nanomaterials was not mentioned by any companies with 250 or more employees or any companies in the primary sector.

The number of employees that actually come into contact with those substances in a company that handles dangerous chemicals isn't necessarily big. Almost every third (30%) handler of dangerous chemicals evaluated that none of their employees come into contact with dangerous chemicals in significant quantities on a daily basis. 50% mentioned that up to one quarter of employees come into contact on that level and 15% mentioned that the amount of such employees is even higher. The number of companies where more than one quarter of employees come into significant contact is somewhat bigger among employers with at least 250 employees and in the group of CMR handlers (24% and 23%).

### **Awareness of handling requirements and working environment related activities**

Questions dealing with awareness and application of different measures were asked from handlers of dangerous chemicals participating in the online survey (sample of 247 respondents).

All handlers of dangerous chemicals should know the REACH<sup>1</sup> regulation (the European Community Regulation on chemicals and their safe use) and act according to it to minimize work environment dangers. Regardless of this, more than half (56%) of the representatives of Estonian companies mentioned that they don't know this regulation. The regulation is implemented by every fourth company (27%) and approximately every third respondent did not know if their company acts according to the REACH regulation. More than half (63%) of those implementing the regulation also know the CLP<sup>2</sup> regulation.

Each company should have all safety files corresponding to the REACH regulation for all dangerous chemicals handled by the company. Companies who mentioned implementing the REACH regulation were asked about following this requirement. All companies belonging to this group do have the safety files (94% have them for all dangerous chemicals) but half mentioned that all safety files conform to the regulation (herewith every fourth is unable to answer this question).

The majority of companies (93%) have carried out risk assessment. Approximately three fourths of those who have carried out risk assessment mentioned that they have mapped work places, tools and equipment associated with dangerous chemicals and the mapping of corresponding work processes is observed by more than 60% of companies. Only one third of dangerous chemicals' handlers have measured the content of dangerous chemicals in the air of the work environment.

The employer should guarantee that employees are aware of the possible impact of the dangerous chemicals on their health, used protective equipment, safety file data etc., and that they have appropriate training. 56% of companies have informed all their employees of possible impact of dangerous chemicals on their health; 77% have informed all employees who come into contact with dangerous chemicals of this contact and 63% have provided all of those who come into

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<sup>1</sup> REACH - Registration, Evaluation and Authorisation of Chemicals.

<sup>2</sup> CLP - Classification, Labelling and Packaging.

contact with dangerous chemicals with adequate instructions/training. 60% of employers have corresponding user manuals for all positions working with dangerous chemicals and 72% use personal protective equipment pertaining to the safety file in case of all positions. Among various measures, using personal protective measures and appropriate hygiene measures are implemented the most. The most infrequently applied measures are decreasing to the minimum the number of employees that come into contact with chemicals and the length and intensity of contact. Individual protective measures are also considered to be the most important in decreasing contact with dangerous chemicals together with training and instruction of employees.

The majority (82%) of companies note that all of their employees undergo regular health surveillance and approximately every tenth company carrying out health surveillance has transferred an employee to another position as a result of it.

There are noticeably less different measures implemented to decrease working environment dangers in companies that according to their own evaluations say that none of their employees come into contact with dangerous chemicals to a significant extent on daily basis (compared to the companies whose employees have that contact). But a significant majority of such employees also carry out risk assessment and health surveillance. As expected, the companies that are aware of the REACH regulation are the ones implementing different measures and following regulations more than companies who are not aware of this regulation.

The larger the number of employees at a company, the more handlers of dangerous chemicals among them and the greater share of their employees come into contact with dangerous chemicals to a significant extent on daily basis. The bigger the employer, the higher their awareness of the REACH regulation. In companies with at least 250 employees the REACH regulation and various protective measures are implemented more; also, they consider implementing the various measures more important than smaller companies. Among companies with 5-9 employees a smaller share have carried out risk assessment and mapped work places, tools and processes associated with dangerous chemicals (when compared to other firms). Very few have measured the content of dangerous chemicals in the air of working environment.

There were more handlers of cancerogenic, mutagenic chemicals or chemicals toxic for reproduction among employers with larger numbers of employees. Handlers of CMRs are more aware of the REACH regulation than handlers of other chemicals and they implement it more (but even among them 23% do not implement it and 33% don't know if the company follows the regulation). Almost all CMR handlers mention that some or all of their employees come into contact with dangerous chemicals to a significant extent. The employees of these companies are also much better informed and equipped. All handlers of CMRs should keep a list of employees coming into contact with these substances; slightly more than one third of respondents note this.

The survey paid particular interest to handlers of nanomaterials. Unfortunately the share of companies identifying themselves as nanomaterial handlers among all companies or the companies handling dangerous chemicals is so small in the sample that it is not possible to draw conclusions (8 respondents in online interviews). Obtaining information about this target group would require a

separate survey, the sample of which should be compiled with the goal to find as many handlers of nanomaterials as possible. This could mean interviewing only among companies in certain fields where the likelihood of identifying handlers of nanomaterials would be higher. It should also be more specifically defined for the survey (and explained to participating companies) as to what quantities and usage/distribution methods qualify them as handlers of nanomaterials.

Based on the conducted survey, it can be concluded that Estonian companies could use more extensive information and more specific instructions when it comes to working environment dangers associated with handling of dangerous chemicals, how to avoid and minimize them and the obligations that go along with their handling.

Every second handler of dangerous chemicals who participated in the online survey is not aware of the REACH regulation and a quarter or more have not informed all of the employees who come into contact with these substances of health risks, provided adequate training or user manuals, and protective equipment. In designing the working environment companies are more concerned with simpler and less costly measures such as personal protective equipment and hygiene measures and less attention is paid to such activities as bringing the number of work processes and employees associated with dangerous substances to a minimum. This is also so in companies who are aware of the REACH regulation and where more employees come into contact with dangerous chemicals to a significant extent on daily basis.

The subject-matter of handling dangerous chemicals generates confusion in some companies – for example noticeable amount of employers mark the answer „do not know“ to some questions related to handling chemicals. Large companies most probably don't have difficulties with identifying themselves as handlers of dangerous chemicals due to more contact with chemicals according to their specialization and therefore a higher level of danger. Those companies are also more aware of requirements and implement more the different measures for protecting employees. Employees of small companies have less contact with dangerous chemicals but due to employer's low awareness and lesser implementation of preventive measures the employees are likely less protected than the staff at large companies. Such employers would need general information on which working environments lead to what kind of contact with dangerous chemicals as well as more specific information on what are the requirements to handling dangerous chemicals and how to decrease dangers in the working environment.