

Science for Environment Policy

Asbestos products and waste: new classification system developed

Researchers have presented a comprehensive new classification manual of asbestos-containing products (ACP), materials (ACM) and waste (ACW) in a recent study. They also mapped suitable landfill sites for the proper disposal of ACW in Italy and developed guidance on assigning ACW to correct European Waste Catalogue (EWC) codes. The research will help operators engaged in asbestos waste disposal across Europe and should contribute to aims for the total removal of asbestos from the EU.

Asbestos can cause cancer and serious lung problems (asbestosis); globally, around 107 000 deaths annually can be attributed to diseases caused by exposure to asbestos. The majority of asbestos-related disease occurs in Europeans a consequence of heavy asbestos use in the past.

Although global use of asbestos is falling, it is still widely used in a range of different products around the world. Asbestos products have been banned in the EU since 2005¹ and many Member States are now remediating former asbestos mines and managing asbestos waste.

In March 2014, the European Commission approved a programme to 'free the EU from asbestos', which encouraged measures to remove asbestos and ACPs by 2028². Italy banned the extraction, import, export and marketing of asbestos in 1992; prior to this, the country was one of the world's leading producers of raw asbestos and ACPs, and had the largest asbestos mine in Europe at Balanegro, near Turin.

Despite extensive regulations, the complex process of classifying and managing asbestos waste is still subject to inconsistencies between European and national regulations in Italy and other European countries. To facilitate asbestos waste disposal within Italy, the researchers mapped asbestos landfill sites across the country, including details regarding landfill capacity to deal with different asbestos waste types.

The mapping exercise demonstrated some of the challenges of disposing of asbestos waste, such as the limited number of available landfill sites. The mapping also identified inconsistencies in ACW classification within Italy: either waste is categorised correctly but nevertheless disposed of in an unsuitable manner, or waste is categorised incorrectly, so that hazardous waste is disposed of at non-hazardous landfill sites—for example, gypsum and asbestos panels removed during remediation operations in buildings should be classified as 'insulation materials containing asbestos' but have sometimes been classified as 'construction materials containing asbestos', which have a different degree of risk.

The researchers also note that, in Italy, seven out of 19 landfill sites operating as non-hazardous waste landfills have been authorised by the competent regional/provincial authorities to accept certain types of hazardous waste.

At worst, ACW is dumped illegally, but any misidentification of waste can lead to risks of dispersion of fibres in the environment, which is both a public health risk and also a risk to the urban and natural landscape. This study created a manual to aid more specific and accurate classification of ACW, and correct identification of landfill sites where ACW should be disposed of, with a view to limiting these problems.

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1. Commission Directive 1999/77/EC: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A31999L0077>

2. Resolution EU - P7_TA, 2013: <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P7-TA-2013-0093+0+DOC+XML+V0//EN>

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ACM have different hazard levels depending on their initial composition and wear. The European Waste Catalogue (EWC)³, a list of waste descriptions established by the European Commission, features eight types of asbestos waste, which are all classified as hazardous. To create their manual, the researchers carefully examined the EWC codes and identified 21 other codes that are also applicable to ACW, even though no specific mention of 'asbestos' is made. The resulting 29 EWC codes were then used to classify products containing asbestos into nine main categories based on the substances with which the asbestos minerals have been blended.

In order to identify the 100 most common types of ACW, with a view to their being correctly classified and managed and to improve worker safety practices, the researchers conducted surveys with all Italian authorities responsible for issuing authorisations pertaining to ACW, 22 working asbestos landfill sites they had mapped nationwide, and remediation and storage companies dealing with ACW. They then produced a table listing the 100 types of ACW identified, their relevant EWC codes, definitions and ACP categories. They also added information on the type of landfill suitable for each.

The system has been proposed as a new national guideline in Italy by the national institute for occupational safety ([INAIL](#)). As it is based on the ACPs' physical properties, taking into account the substances with which the asbestos minerals have been mixed, it can be applied worldwide.

The researchers say their study should help to standardise the many different classifications of asbestos products across Europe. The methods outlined to aid in the safe disposal of asbestos waste in Italy could also contribute to actions to remove asbestos from within other EU countries.



3. Commission Decision No. 2014/955/EU: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L.2014.370.01.0044.01.EN.G>