

TECHNICAL DATASHEET

NEN 7375 Monolithic Tank Test

Have you classified your waste?

To complement our existing suite of Waste Acceptance Criteria analysis, ALS provides a Tank Test for the assessment of Monolithic Waste. Monolithic waste is waste that is solidified and formed into a block or 'monolith'. This can be a pre-existing monolith, for example, concrete structures or slabs. Blocks can also be produced to encase hazardous wastes within stable binding materials such as cement, glass, resin or rubber. This seals in the hazardous components, allowing the waste to be disposed of at an inert landfill site, reducing the costs of disposing of hazardous waste.

Do I need to test my waste?

Since the introduction of the Landfill Regulations 2002, all waste has to be classified into one of three categories: Inert, Stable Non-Reactive or Hazardous to determine the landfill for disposal. If you produce monolithic waste, or waste which you want to seal in monolithic blocks then you need to test the waste and compare the results with the Waste Acceptance Criteria. The classification of the waste will determine which landfill site it can be sent to and therefore the cost of disposal.

How does the tank test work?

ALS offers the Tank Test EA NEN 7375:2004 Leaching Characteristics of Moulded or Monolithic Building and Waste Materials, which is designed specifically to determine the classification of Monolithic wastes. The test involves submerging blocks of the waste under water in controlled conditions, over a period of 64 days. The water is changed at pre-determined intervals and samples analysed to identify any leaching of constituents. If the analysis shows that no leaching has taken place during the test then the waste can be classified as inert and disposed of at an appropriate landfill. The test looks for the parameters specified in the Waste Acceptance Criteria, including Arsenic, Mercury, Lead, Chloride and Fluoride.

How are the results supplied?

Analytical reports for Tank Tests contain much data and can therefore be difficult to read. The ALS report contains easy-to-use graphical representations and simple explanations of results. Using terminology consistent with the Tank Test standard EA NEN 7375:2004, the report is separated into sections specific to the Customer, the Consultant and the Landfill Operator. The consultancy pages are set out in one page per component with easy to follow graphs showing leaching characteristics and acceptance limits.



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What sort of sample should be used?

For each analysis, ALS require a minimum of two test pieces, preferably of a regular shape, for example cubes or cylinders, however, any shape can be accommodated. If the sample has been created specifically for the Tank Test i.e. a prepared concrete cube, then it should be fully cured before being sent for analysis. Samples should be cured in the same way as the waste intended for final landfill to ensure a representative sample. If the sample is cut or drilled from an existing larger block, cutting fluid or cooling water should be avoided as this may affect the result. To achieve the best results, ALS recommends samples between 10 and 15cm².

Our expertise

ALS has a dedicated laboratory for Waste Acceptance Criteria analysis. Established in 2005, the laboratory has been designed to carry out a range of leaching methodologies including BSEN 12457 1,2 and 3. Leaching is carried out on the waste to generate eluate samples for analysis, the results of which can be compared with the WAC limits to identify the most appropriate class of landfill to accept the waste. A team of dedicated technicians work in the laboratory preparing waste samples ready for analysis at ALS' UKAS accredited laboratories.

ALS can also offer Aquatic Toxicity Testing to meet the requirements of H14 of the Hazardous Waste Directive, for the assessment of hazardous Ecotoxic properties. The analysis is recommended in cases where the potential hazards cannot be adequately determined from the composition of the waste. For example, where the waste contains substances with no aquatic toxicity data or where the waste is an uncharacterised mixture (i.e. there is no, or incomplete chemical analysis and/or there is reason to believe that the waste may contain unknown substances or breakdown products).

