

Durability of wood and wood-based products — Recommendations for measurement of emissions to the environment from treated wood in service

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National foreword

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**Durability of wood and wood-based products -
Recommendations for measurement of emissions to the
environment from treated wood in service**

This CEN Report was approved by CEN on 6 July 2001. It has been drawn up by the Technical Committee CEN/TC 38.

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Foreword

This document has been prepared by CEN /TC 38, "Durability of wood and wood-based products", the secretariat of which is held by AFNOR.

The status of this document as CEN Report has been chosen because the most of its content is a review of methods of measurement of emissions from preservative treated wood in order to stimulate the discussion of the test parameters and the test methods for emissions to be retained.

Introduction

The regulatory control of biocides and biocidal products (as defined under the UE Directive 98/8/EC, including wood preservatives, requires increasing amounts of environmentally related information on which to base decisions.

In the case of wood preservatives (product type 8) this includes the provision of data concerning wood preservative treated articles.

This data is used to assess whether there is an unacceptable environmental impact likely to arise from the use of the treated timber product.

Such a risk assessment has to consider potential releases to all environmental compartments, namely air, soil, surface water, groundwater and sediment.

Many uses of wood preservative products are intended to extend the natural durability based expectation of service life, sometimes in the order of several decades.

It is therefore necessary to have a means of determining not only absolute values for potential emissions to the environment but perhaps more importantly the fluxes, or rates of emission during the course of time. They should be representative.

That is to say they should represent the emissions from in service sized pieces of treated wood.

Flux rates and profiles can then be inserted into mathematical models usually based on defined scenarios .

Such determinations of emission rates will also be invaluable in the development of new products because they will enable the researcher to identify early in the development of the product whether there are potential problems with the product in its areas of intended use.

It is quite impractical to mimic all of the biotic and abiotic factors present the natural environment in the laboratory. It has to be decided if a means can be found which will take into account as many as possible of these factors together with the large variation in climate and socio-economic factors present in Europe. Is it possible to conceive of a "surrogate" environment into which to determine emissions?

If it is believed that there is a potential for creating EN standards in this area it is vital that the methods can be reproduced in any suitably equipped laboratory, whether government, institute or industry. The methods should also not be costly, but must be cost effective.

Having produced an emission this should then be characterised. This might be through chemical analysis of the active substances, substances of concern and relevant metabolites; or by some other tests which can indicate ecotoxicological effects, for example so-called "soup testing". The next steps would be to identify the environment 'belonging' to the treated component and to characterise the physical-chemical behaviour of the active substances, substances of concern and relevant metabolites in order give an answer about their bioavailability in a given environment.

These aspects are being considered by other expert groups in the EU and the OECD and should not be considered part of the remit for CEN/TC 38 to produce standards.

Any proposed standards should also take into consideration of the Technical Guidance Documents (currently being revised) in place for the Biocidal products Directive (98/8/EC), and the New and Existing Substances Regulations