

Test Report

ASONA NEDERLAND B.V.

Product Emissions in
accordance with CDPH-IAQ


SONACOUSTIC

September 2011

Client: **ASONA NEDERLAND B.V.**
P.O.BOX 9057
1180 HB Amstelveen
Netherlands

Date: 29 September 2011

Testing Laboratory: Eurofins Product Testing A/S
Smedeskovvej 38, DK-8464 Galten, Denmark



Thomas Neuhaus
Head of product emission test centre



Martin Møller Pedersen
M.Sc. (Pharm)

The results are only valid for the tested sample(s).

This report may only be copied or reprinted in its entity, parts of it only with a written acceptance by Eurofins Product Testing A/S.

Table of Contents

1	Description of the Applied Testing Method	3
1.1	Test Specimen	3
1.2	Test Chamber	3
1.3	Sampling, Desorption, Analyses	3
1.4	Uncertainty of the test method	5
2	Results	6
2.1	Emissions Test after 11 Days	6
2.2	Emissions Test after 12 Days	6
2.3	Emissions Test after 14 Days	7
3	Interpretation of the Results	7
Appendices		
	Appendix 1: Photo of the sample	8
	Appendix 2: Chain of Custody	9

Introduction

On 29 June 2011 Eurofins Product Testing A/S received a sample of insulation named

SONACOUSTIC

Model: PL

for emissions testing in accordance with the CDPH-IAQ test method. The sample was clearly labelled, properly packaged and not damaged. Testing was carried out in the laboratories of Eurofins Product Testing A/S. Before starting the testing procedure on 11 August 2011 the sample had been stored unopened at room temperature.

1 Description of the Applied Testing Method

The applied method complies with the method "Standard method for the testing and evaluation of volatile organic chemical emissions from indoor sources using environmental chambers (version 1.1)" as defined by the California Department of Public Health (CDPH) - Version of February 2010. The internal method numbers are: 9810; 9811, 9812, 2802, 2803, 8400.

1.1 Test Specimen

A sample was sent by the client to the laboratory of Eurofins Product Testing A/S in an airtight package. The package was opened and a test specimen was cut out. Edges and back were covered with aluminium foil. The test specimen was transferred into a test chamber immediately (internal method no.: 9810).

1.2 Test Chamber

The test chamber was consisting of stainless steel and had a volume of 119 litres. The air clean-up was realized in multiple steps. Before loading the chamber a blank check of the empty chamber was performed. The operation parameters were 23 °C, 50 % relative air humidity (in the supply air) with an air exchange rate of 0,5 per hour. The loading of the test chamber was 1.6m² test specimens per m³ air volume (internal method 9811). Results were recalculated to loading factor 0.4 m²/m³.

1.3 Sampling, Desorption, Analyses

1.3.1 Testing for Carcinogens after 11, 12 and 14 Days

The presence of carcinogens and reproductive/developmental toxins (Cal/EPA OEHHA) was tested by drawing air samples from the chamber outlet through Tenax TA tubes (main tube and backup tube) after 11, 12 and 14 days. Analyses were done by thermal desorption and gas chromatography / mass spectroscopy (internal methods no.: 9812 / 2808). The absence of a listed carcinogen was stated if the specific combination of fragment ions was lacking at the specific retention time in the chromatogram. Otherwise it was checked whether the required detection limit (1 µg/m³) was exceeded. In this case the identity was finally checked by comparing full scan sample mass spectra with full scan standard mass spectra.

This test covered only substances that can be adsorbed on Tenax TA and that can be thermally desorbed. If other emissions occurred, then these could not be monitored (or with limited reliability only).

1.3.2 VOC Emissions Testing after 11, 12 and 14 Days

The emissions of organic compounds after 11, 12 and 14 days were tested by drawing air samples from the chamber outlet through Tenax TA tubes (main tube and backup tube). Analyses were done by thermal desorption and gas chromatography / mass spectroscopy (internal methods no.: 9812 / 2808). All single substances were identified if the toluene equivalent in the Total Ion Chromatogram (TIC) exceeded 2 µg/m³. Quantification was done with the respective response factor and the TIC signal, or in case of overlapping peaks by calculating with fragment ions. All non-identified substances were quantified as toluene equivalent if giving more than 2 µg/m³.

Calculation of the TVOC (Total Volatile Organic Compounds) was done by addition of the results of all substances between C₅ and C₁₇ as toluene equivalent.