Test Report

ASONA NEDERLAND B.V.

Emission test of

SONACOUSTIC

in accordance with M1 classification

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

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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 M1 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 Protocol for Chemical and Sensory Testing of Building Materials as defined by the Finnish Emission Classification of Building Materials (version of 2004). The test method is based on the published methods: ISO 16000-3, ISO 16000-6, 16000-9, 16000-11. The internal method numbers are: 9810, 9811, 9812, 2808, 4430 and 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. The test specimen was transferred into a test chamber immediately (internal method no.: 9810).

1.2 Test Chamber

- **Chemical Testing:** 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 ½ per hour. The loading of the test chamber was 1.6 m² test specimen per m³ air volume. (internal method 9811). Results were recalculated to loading factor 0.4 m^2/m^3.

- **Sensory Testing:** The test chamber was a "BIG-PAC" chamber made of glass and had a volume of 200 litres. The air clean-up was realized in multiple steps. Before loading the chamber, a blind check of the empty chamber was performed. The operation parameters were 23 °C, 50 % relative air humidity (in the supply air). When assessing the odour, an area specific air flow rate of 1.4 $m^3/(h \times m^2)$ assured a flow rate of 0.9 litres per second (3.24 m³/h, air exchange 16 per hour) at the chamber outlet. The loading of the test chamber was 11.4 m^2 test specimen per m³ air volume (internal method 9811).

1.3 Sampling, Desorption, Analyses

All emissions were calculated as area specific emission rate SER with the following formula:

SER = C x n / L

With:
C Concentration in test chamber, µg/m³
n Air exchange rate, 1/h
L Loading factor, m²/m³

1.3.1 Testing of Carcinogens after 28 Days

The presence of volatile organic carcinogens (IARC 1987 listing, category C1, 1 µg/m²xh and above), which means benzene and vinyl acetate, was tested.

The test was done by drawing air samples from the chamber outlet through Tenax TA tubes (main tube and backup tube) after 28 days. Analyses were done by thermal desorption and gas chromatography / mass spectroscopy (internal methods: 9812 / 2808).