REPORT
issued by an Accredited Testing Laboratory

Contact person
Marina C Andersson, cr
Fire Research
+46 10 516 52 92
marinac.andersson@sp.se

Date 2015-11-19
Reference 5P08124



Accred. No. 1002
Testing
ISO/IEC 17025

Berteco AB
Elvägen 9
443 61 STENKULLEN

# Reaction to fire tests for floorings - Part 1: Determination of the burning behaviour using a radiant heat source - EN ISO 9239-1 and ignitability according to EN ISO 11925-2

(2 appendices)

## Introduction

SP has by request of Berteco AB performed fire tests according to EN ISO 9239-1 and EN ISO 11925-2. The purpose of the tests is basis for technical fire classification.

## Product

According to client:

Floor covering called "Scan-lock", consisting of polyvinyl chloride, plasticizers and fillers (Norvinyl GB.80.10.00750.FB). The product has a nominal thickness of 6.25 mm and a nominal density of 1 310 kg/m$^3$.

## Manufacturer

Berteco AB, Stenkullen, Sweden.

## Sampling

The sample was delivered by the client. It is not known to SP Fire Research if the product received is representative of the mean production characteristics.

The sample was received on October 21, 2015 at SP Fire Research.

## Test results

The test results are given in appendix 1- 2.

The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

## Note

The accreditation referred to is valid for EN ISO 9239-1 and EN ISO 11925-2.

**SP Technical Research Institute of Sweden**
**Fire Research - Fire Dynamics**

Performed by

Marina C Andersson

Examined by

Per Thureson

## Appendices

1 – 2 Test results

Appendix 1

# Test results – EN ISO 9239-1:2010

## Product

According to client:

Floor covering called "Scan-lock", consisting of polyvinyl chloride, plasticizers and fillers (Norvinyl GB.80.10.00750.FB). The product has a nominal thickness of 6.25 mm and a nominal density of 1 310 kg/m$^3$.

## Application

The specimen was loosely put on to a particle board, having a density of 680 kg/m$^3$ approximately.

## Test results

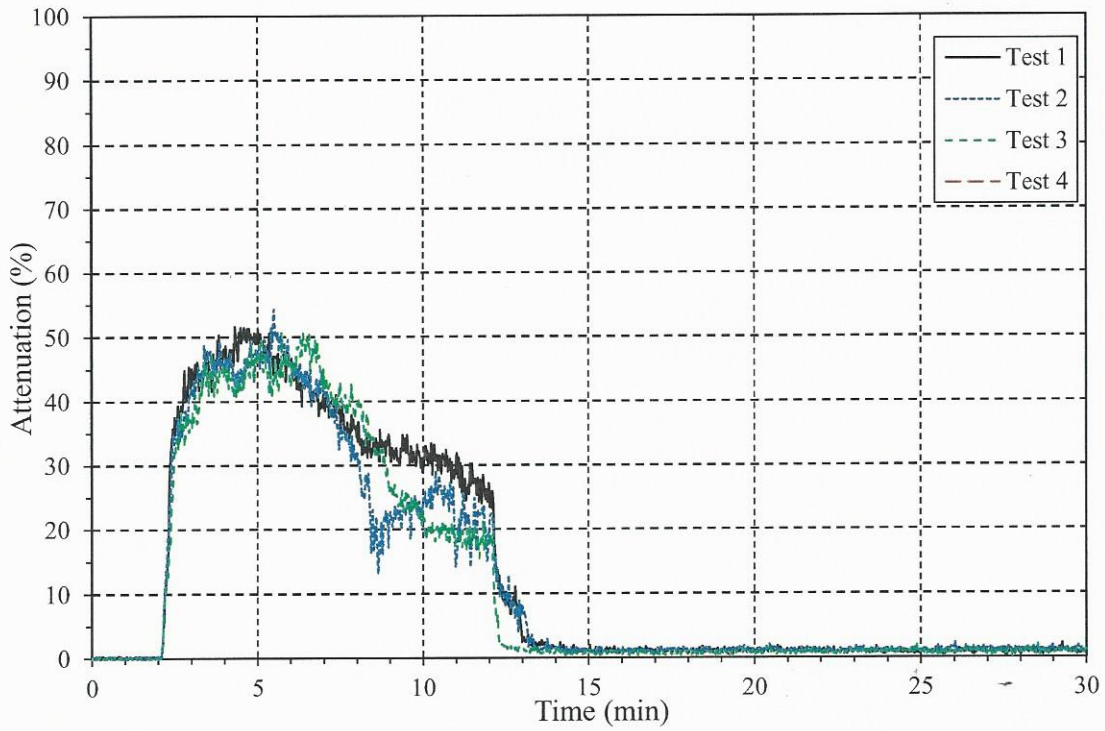
| Test no | 1 | 2 | 3 |
|---|---|---|---|
| Direction | none | none | none |
| Flame spread distance, mm | Time, min:s | Time, min:s | Time, min:s |
| 60 | 2:32 | 2:32 | 2:48 |
| 110 | 4:05 | 5:03 | 4:49 |
| 160 | - | - | - |
| Flames at flame front extinguished | 5:06 | 5:20 | 5:20 |

| Test no | 1 | 2 | 3 |
|---|---|---|---|
| Direction | none | none | none |
| Time, min | Flame spread distance, mm | Flame spread distance, mm | Flame spread distance, mm |
| HF-10 | 110 | 80 | 110 |
| HF-20 | - | - | - |
| HF-30 | - | - | - |

Appendix 1

| Test no | 1 | 2 | 3 | Average value |
|---|---|---|---|---|
| Direction | none | none | none | |
| Maximum flame spread, mm | 120 | 120 | 130 | - |
| Critical radiant flux (CHF), kW/m$^2$ | 10.9 | 10.9 | 10.8 | 10.9 |
| Peak smoke production, % | 52 | 54 | 51 | 52 |
| Light absorption (area under curve), % x min | 401 | 366 | 356 | 374 |

**Smoke generation sample no 1 to 3**



Appendix 1

**Measured data**

Thickness 4.94 – 5.78 mm.

Area weight 5.03 kg/m$^2$.

**Conditioning**

According to EN 13238:2010.

Temperature (23 ± 2) °C.

Relative humidity (50 ± 5) %.

**Date of test**

November 4, 2015.

Appendix 2

# Test results – EN ISO 11925-2:2010

## Product

According to client:

Floor covering called "Scan-lock", consisting of polyvinyl chloride, plasticizers and fillers (Norvinyl GB.80.10.00750.FB). The product has a nominal thickness of 6.25 mm and a nominal density of 1 310 kg/m$^3$.

## Test preparation

The specimen was loosely put onto a particle board having a density of 680 kg/m$^3$ approximately.

## Application

Surface exposure. Flame exposure time was 15 seconds.

## Test results

| Test no | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Direction | ↑ | ↑ | ↑ | → | → | → |
| The sample ignited, s | NI | NI | NI | NI | NI | NI |
| The flames reach 150 mm, s | - | - | - | - | - | - |
| Burning droplets | No | No | No | No | No | No |
| Time when filter paper ignited, s | - | - | - | - | - | - |

NI = No ignition.

## Measured data

Thickness 4.94 – 5.78 mm.

Area weight 5.0 kg/m$^2$.

Density 905 – 1000 kg/m$^3$.

## Conditioning

According to EN 13238:2010.

Temperature (23 ± 2) °C.

Relative humidity (50 ± 5) %.

## Date of test

November 5, 2015.