

Bridgehill AS
Postboks 2221
Stubberød
NO-3255 Larvik
Norge

Non-combustibility according to EN ISO 1182

(4 appendices)

Introduction

RISE has by request of Bridgehill AS performed a fire test according to EN ISO 1182. The purpose of the test is to form a basis for technical fire classification.

This report replaces RISE report O100352-176905, dated October 18, 2021. This revision includes an update of product details.

Product

According to the client:

Fabric for fire blanket called “Bridgehill Standard Blanket”, consisting of Pyroxene. The product has a nominal area weight of 400 g/m² and a nominal thickness of 0.4 mm.

Manufacturer

Bridgehill AS, Larvik, Norway.

Sampling

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

The sample was received on October 1, 2021 at RISE, Fire Technology.

Test results

The test results are given in appendix 1-2.

The test results relate only 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.

Deviation from standard

The construction of the specimens were not according to standard as the material fringe. The specimens were constructed by cutting strips with a height of 50 mm and firmly rolling them to a cylinder with diameter 45 mm, instead of cutting discs and stacking them to a height of 50 mm.

Note

One specimen were constructed by cutting discs and stacking them to a height of 50 mm. This test was conducted only as a reference test.

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Accred. No. 1002
Testing
ISO/IEC 17025

Note

The accreditation referred to is valid for EN ISO 1182.

**RISE Research Institutes of Sweden AB
Department Fire Technology - Reaction to Fire Medium Scale Lab**

Performed by

Examined by

Susanne Blomqvist

Per Thureson

Appendices

1. Test results – EN ISO 1182:2010 – Roll
2. Test results – EN ISO 1182:2010 – Discs
3. Calibration results according to EN ISO 1182:2010
4. Photograph of the tested specimens

Appendix 1

Test results – EN ISO 1182:2010**Product**

According to the client:

Fabric for fire blanket called “Bridgehill Standard Blanket”, consisting of Pyroxene. The product has a nominal area weight of 400 g/m² and a nominal thickness of 0.4 mm.

Note

The specimens were constructed by cutting stripes with a height of 50 mm and firmly rolling them to a cylinder with diameter 45 mm. The density of the specimens was as close to the materials measured density as possible.

Test results

The table below shows the maximum temperature rise relative to the final temperature recorded by the furnace thermocouple, duration of sustained flaming and mass loss.

Test specimen No.	Max. temperature rise Furnace (°C)	Duration of sustained flaming (s)	Mass loss (%)
1	1	0	1
2	1	0	1
3	1	0	1
4	1	0	1
5	2	0	1
Average	1	0	1

Measured data

Thickness 0.3 mm approximately.

Area weight 341 g/m² approximately.

Density 1260 kg/m³ approximately.

Conditioning

Temperature (60 ± 5) °C.

Time (20 – 24) h.

Date of test

October 12, 2021 (test no 1).

October 13, 2021 (test no 2 and 3).

October 15, 2021 (test no 4 and 5).

Appendix 2

Test results – EN ISO 1182:2010**Product**

According to the client:

Fabric for fire blanket called “Bridgehill Standard Blanket”, consisting of Pyroxene. The product has a nominal area weight of 400 g/m² and a nominal thickness of 0.4 mm.

Note

The specimens were constructed by cutting discs with the diameter of 45 mm and stacking them on top of each other to get a height of 50 mm.

Test results

The table below shows the maximum temperature rise relative to the final temperature recorded by the furnace thermocouple, duration of sustained flaming and mass loss.

Test specimen No.	Max. temperature rise Furnace (°C)	Duration of sustained flaming (s)	Mass loss (%)
1	2	0	1
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
Average	-	-	-

Measured data

Thickness 0.3 mm approximately.

Area weight 341 g/m² approximately.

Density 1260 kg/m³ approximately.

Conditioning

Temperature (60 ± 5) °C.

Time (20 – 24) h.

Date of test

October 13, 2021.

Appendix 3

Calibration results according to EN ISO 1182:2010**Calibration of furnace wall temperature according to EN ISO 1182:2010 part 7.3.1**

The average deviation of the temperature on the three vertical axes from the average furnace wall temperature $T_{\text{avg.dev.axis}}$ shall be less than 0.5 %.

RISE, $T_{\text{avg.dev.axis}} = 0.3 \%$.

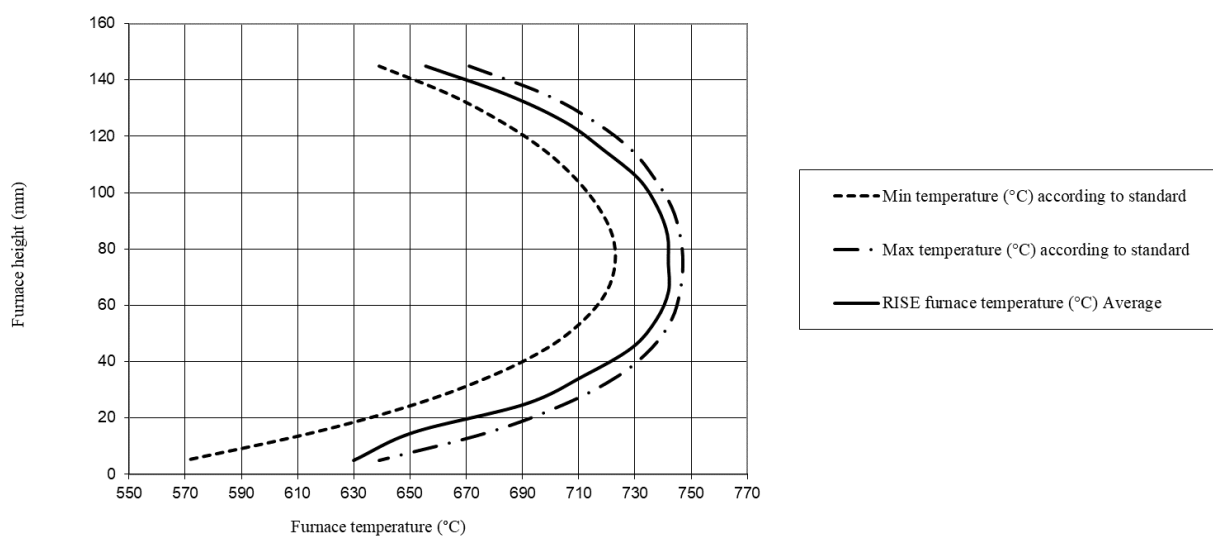
The average deviation of the temperature on the three levels from the average furnace wall temperature $T_{\text{avg.dev.level}}$ shall be less than 1.5 %.

RISE, $T_{\text{avg.dev.level}} = 0.1 \%$.

The average wall temperature at level (+30 mm) $T_{\text{avg.level a}}$ is less than the average wall temperature at level (-30 mm), $T_{\text{avg.level c}}$.

RISE, $T_{\text{avg.level a}} = 837 \text{ }^{\circ}\text{C}$.

RISE, $T_{\text{avg.level c}} = 839 \text{ }^{\circ}\text{C}$.

Calibration of furnace temperature according to EN ISO 1182:2010 part 7.3.2

Furnace temperature profile along its axis measured with Thermal sensor.

Appendix 4

Photograph of the tested specimens

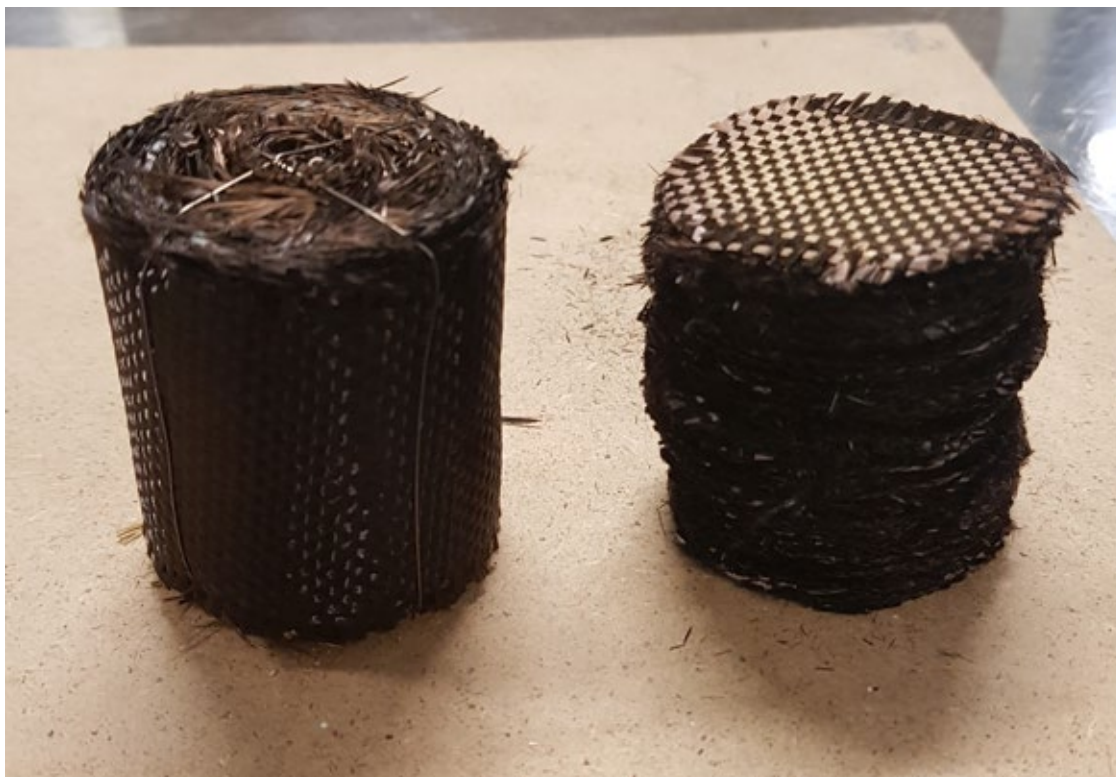


Photo 1. Left specimen constructed by rolling the material. Right specimen constructed with discs. Both specimens are after test.