Classification Report
Ventilation ducts

Name of sponsor:	**Rockwool LTD**		
Product name:	FIREPRO DuctRock Slab		
File no.:	PCA10496C		
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ilac-MRA DANAK Test Reg.no. 0012

Client information

Client: Rockwool LTD

Address: Rockwool Site, Pencoed Bridgend

GB-CF356NY Mid Glamorgan

The results relate only to the items tested. The classification report should only be reproduced in extenso – in extracts only with a written agreement with this institute.

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1 Introduction

This classification report defines the classification assigned to the product in accordance with the procedures given in DS/EN 13501-3:2005 + A1:2009.

This classification report includes the direct field of application of the test results.

2 Details of classified product

General

Producer of product: Rockwool LTD

The product was designated: FIREPRO DuctRock Slab

The insulation in the test reports was designated Rockwool Ductrock 60L. The client has declared that the product was identical to FIREPRO DuctRock Slab

The classification is valid for the following end use application: Ventilation ducts

Product description

The ventilation duct consists of insulated horizontal and vertical rectangular steel ducts. The horizontal ducts are suspended with steel rods. The duct insulation is designated FIREPRO DuctRock Slab with a nominal thickness of 60 mm and a nominal density of 150 kg/m^3.

The details of the product are described in the test reports listed below.

3 Reports in support of the classification

Test report

The product was successfully tested in accordance with EN 1366-1:2014. The evidence for this is given in the test reports listed below:

Reference tests:				
Name of Laboratory	Name of sponsor	Test report file no.	Test method	Date of test
Danish Institute of Fire and Security Technology	Rockwool International A/S	PGA10713A dated 24-08-2015	EN 1366-1:2014	07-07-2015
Danish Institute of Fire and Security Technology	Rockwool International A/S	PGA10785A dated 15-02-2016	EN 1366-1:2014	11-12-2015
Danish Institute of Fire and Security Technology	Rockwool International A/S	PGA10787A dated 15-02-2016	EN 1366-1:2014	09-12-2015

Danish Institute of Fire and Security Technology	Rockwool International A/S	PGA10787B dated 15-02-2016	EN 1366-1:2014	09-12-2015

Test results

DBI test report PGA10713A concerns test of a horizontal duct B (fire from inside)

Test Duration	**Parameter**	**Test results**
90 minutes	**Integrity**	
	- Time of ignition of cotton pad:	No failure
	- Time of occurrence of sustained flaming:	No failure
	- Time of failure of gap gauge criteria:	No failure
	Insulation	
	- Time of failure of measured average temperature rise:	77 minutes
	- Failure of maximum measured temperature rise	77 minutes

DBI test report PGA10785A concerns test of a horizontal duct A (fire from outside)

Test Duration	**Parameter**	**Test results**
92 minutes	**Integrity**	
	- Time of ignition of cotton pad:	No failure
	- Time of occurrence of sustained flaming:	No failure
	- Time of failure of gap gauge criteria:	No failure
	- Time of failure for leakage exceeding 15 $m^3/h/m^2$.	No failure
	Insulation	
	- Failure of insulation due to failure of integrity:	No failure
	- Time of failure of measured average temperature rise:	No failure
	- Failure of maximum measured temperature rise	No failure
	Ducts with combustible linings (Kitchen extract)	
	- Failure of measured maximum temperature rise	37 minutes
	Smoke leakage	
	- Time of failure for maintaining the underpressure inside the duct	No failure
	- Time of failure for leakage exceeding 10 $m^3/h/m^2$.	No failure

DBI test report PGA10787A concerns test of a vertical duct A (fire from outside)

Test Duration	**Parameter**	**Test results**
77 minutes	**Integrity**	
	- Time of ignition of cotton pad:	No failure
	- Time of occurrence of sustained flaming:	No failure
	- Time of failure of gap gauge criteria:	No failure
	- Time of failure for leakage exceeding 15 $m^3/h/m^2$.	No failure
	Insulation	
	- Failure of insulation due to failure of integrity:	No failure
	- Time of failure of measured average temperature rise:	No failure
	- Failure of maximum measured temperature rise	No failure
	Ducts with combustible linings (Kitchen extract)	
	- Failure of measured maximum temperature rise	40 minutes
	Smoke leakage	
	- Time of failure for maintaining the underpressure inside the duct	No failure
	- Time of failure for leakage exceeding 10 $m^3/h/m^2$.	No failure

DBI test report PGA10787B concerns test of a vertical duct B (fire from inside)

Test Duration	**Parameter**	**Test results**
77 minutes	**Integrity**	
	- Time of ignition of cotton pad:	No failure
	- Time of occurrence of sustained flaming:	No failure
	- Time of failure of gap gauge criteria:	No failure
	Insulation	
	- Time of failure of measured average temperature rise:	66 minutes
	- Failure of maximum measured temperature rise	72 minutes

4 Classification and field of application

Reference

This classification has been carried out in accordance with clause 7.2.2 of EN 13501-3:2005 + A1:2009.

Classification

The product is classified according to the following combinations of performance and classes as appropriate.

Fire resistance classification: EI 60 (ve ho i ↔ o) S

Field of application

The classification is valid for the following end use conditions:

The steel duct

- With steel duct dimensions up to 1250 x 1000 mm (width x height)
- With an underpressure or overpressure up to 500 Pa.
- With leakage class B according to EN 1507 or tighter.

The penetration

- Penetrating flexible or rigid wall constructions with a fire resistance equal to or greater than EI 60 with a minimum thickness 95 mm.
- Penetrating rigid floor constructions with a fire resistance equal to or greater than EI 60 with a minimum thickness 100 mm.
- The gap between the duct insulation and the supporting construction shall not exceed 20 mm

The insulation

- With insulation type FIREPRO DuctRock Slab, nominal thickness 60 mm and nominal density 150kg/m^3.

The suspension device

- The loadbearing component of the suspension device system shall be sized so that the bending stress does not exceed that applied to the equivalent member in the test.

Horizontal duct

- With suspensions devices of steel with maximum tensile stress in all vertically orientated components not exceeding 6 N/mm^2 and shearing stress in screws of property class 4.6 according to EN 20898-1 not exceeding 10 N/mm^2.
- With distance between suspension devices not exceeding 1500 mm.
- The lateral distance between the outer vertical surface of the steel duct and the centreline of the suspension rod shall not exceed 50 mm.

- The distance from the suspension devices to the closest duct or insulation joint must not exceed 10 ± 100 mm.

Vertical duct
- With distance between supporting constructions does not exceed 5 m

Note: Regarding temperature measurement for ducts with combustible lining (Kitchen extract). Failure occurred after 37 minutes on the horizontal duct.

5 Limitations

This document does not represent type approval or certification of the element.

6 Remarks

This report has only been printed in a pdf-version. DBI has not issued a hard copy version.

All values mentioned in this report are nominal values, production tolerances are not considered.

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