This classification report is a revised of DBI test report PCA10496A dated 15-06-2018.
This classification report supersedes any previous versions.

Classification Report Ventilation ducts

Name of sponsor:	**Rockwool LTD**		
Product name:	FIREPRO® DuctRock® Slab		
File no.:	PCA10496A	**Rev:**	1
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ilac-MRA DANAK Test Reg.no. 0012

Client information

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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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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 both the direct and extended field of application of the test results.

Details of classified product

General

Producer of product: Rockwool LTD

The product was designated: FIREPRO® DuctRock® Slab
The classification is valid for the following end use application: Ventilation ducts

Product description

The ventilation ducts consists of insulated horizontal and vertical steel ducts. The horizontal steel ducts are suspended with steel rods. The duct insulation for test specimen from PGA11040A, PGA11041A and PGA11069A is designated FIREPRO® DuctRock® Slab with a nominal thickness of 90 mm and a nominal density of 180 kg/m^3. The duct insulation for test specimen from PGA10618A_rev1 is designated FIREPRO® DuctRock® Slab with a nominal thickness of 80 mm and a nominal density of 180 kg/m^3.

Rockwool has declared that Rockwool Ductrock 90L and Ductboard 120 is the same product as FIREPRO® DuctRock® Slab. The only difference is the thickness.

The details of the product are described in DBI test reports listed in table 3.1.

Reports in support of the classification

Test reports

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

Table 3.1:

Reference test:				
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	PGA11040A dated 27-06-2017	EN 1366-1:2014	08-06-2017
Danish Institute of Fire and Security Technology	Rockwool International A/S	PGA11041A dated 30-06-2016	EN 1366-1:2014	29-06-2015
Danish Institute of Fire and Security Technology	Rockwool International A/S	PGA11069A dated 27-06-2017	EN 1366-1:2014	01-06-2017
Danish Institute of Fire and Security Technology	Rockwool International A/S	PGA10618Arev1 dated 18-03-2016	EN 1366-1:2014	11-12-2014

Test results

DBI test report PGA11041A concerns test of a horizontal duct A (fire from outside):

Test Duration	Parameter	Test results
122 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
	- Time of failure of maximum measured temperature rise:	No failure
	Insulation for combustible lining	
	- Time of failure of measured average temperature rise	71 minutes
	- Time of failure of maximum measured temperature rise:	75 minutes
	Smoke leakage	
	- Time of failure for duct leakage from the duct exceeding 10 $m^3/h/m^2$:	No failure

DBI test report PGA10618Arev1 concerns test of a vertical duct A (fire from outside):

Test Duration	Parameter	Test results
120 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

	- Time of failure of maximum measured temperature rise:	No failure
	Insulation for combustible lining	
	- Time of failure of maximum measured temperature rise:	62 minutes
	Smoke leakage	
	- Time of failure for duct leakage from the duct exceeding 10 $m^3/h/m^2$:	No failure

DBI test report PGA11040A concerns test of a vertical duct B (fire from inside):

Test Duration	**Parameter**	**Test results**
122 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:	No failure
	- Time of failure of maximum measured temperature rise:	No failure

DBI test report PGA11069A concerns test of a horizontal duct B (fire from inside):

Test Duration	**Parameter**	**Test results**
121 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:	No failure
	- Time of failure of maximum measured temperature rise:	120 minutes

Extended application report

Name of Laboratory	Name of sponsor	Extended application report File No.	Standard	Date
Danish Institute of Fire and Security Technology	Rockwool A/S	PHA10061A	EN 15882-1:2012	30-06-2017

The purpose of extended application is to include test report PGA10618Arev1 in duct systems with larger thickness. PGA10618Arev1 concerns a vertical duct A tested with FIREPRO® DuctRock® Slab. The insulation had the material parameters; nominal thickness 80 mm and a nominal density 180 kg/m^3.

Rockwool has declared that Rockwool Ductrock 90L and Ductboard 120 is the same product as FIREPRO® DuctRock® Slab. The only difference is the thickness

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 120 (ve, ho, i ↔ o) S**

Field of application

The classification is valid for the following end use conditions:

The insulation

- With insulation type FIREPRO® DuctRock® Slab, nominal thickness 90 mm and nominal density 180 kg/m^3

The steel duct

- With steel duct dimensions up to 1000 x 1250 mm (height x width).
- With an under-pressure or over-pressure up to 500 Pa.
- With leakage class B according to EN 1507 or tighter.
- With the flanges spot welded to the duct.
- With one stiffener Ø15 mm pipe inside each duct segment.

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 suspension devices of steel with maximum tensile stress in all vertically orientated components not exceeding 9 N/mm^2 and shearing stress in screws of property class 4.6 according to EN ISO 898-1 not exceeding 15 N/mm^2.

- With distance between suspensions devices not exceeding 1500 mm.

- The lateral distance between the outer vertical surface of the steel duct and the center line of the suspension rod shall not exceed 50 mm.

- The maximum distance from the suspension device to the closest duct joint must not exceed 50 + 100 mm.

- The maximum distance from the suspension device to the closest insulation joint must not exceed 273 ± 100 mm.

Vertical duct

- With distance between supporting constructions not exceeding 5 m.

Penetration

- Penetrating only in rigid wall constructions or flexible walls with a fire resistance equal to or greater than EI 120 with a minimum thickness of 130 mm.

- Penetrating rigid floor constructions with a fire resistance equal to or greater than EI 120 with a minimum thickness 150 mm.

- The gap between the duct insulation and the supporting construction shall not exceed 20 mm.

- 4 pcs. of L steel angles of 50 x 50 x 45 x 2.5 mm must be fixed to the steel duct and the supporting construction on both sides of the floor.

- U-profiles 60 x 25 x 1.6 mm must be installed approx. 20 mm from the wall on both sides of the wall. The legs of the U-profiles are lowered in to slides cut in the wool, and is fixed to the duct by means of 100 mm long self tapping screws, 4 on the top and bottom profiles and 2 on the vertical profiles

Note: Regarding temperature measurement for ducts with combustible lining. Failure occurred after 62 minutes on the vertical duct A

Limitations

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

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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