Topvex FR

Centrales de traitement d'air compactes

systemair

EUROVENT CERTIFICATION COMPANY SCRL
53 rue Turbigo 75003 Paris FRANCE - RCS Paris B 393 363 460 - Code APE : 748K

Accreditation # 5-0527 Industrial Product Certification
according to ISO/IEC guide 65:1996 or EN 45011:1998
Scope and validity at www.cofrac.fr
International recognition EA/IAF

Certification Diploma N° : 12.01.001

EUROVENT Certification Company certifies that

Air Handling Units

from

SYSTEMAIR AB

Located at

Industrivägen 3, 739 30 Skinnskatteberg, Sweden

Range

Topvex

Software for calculation of performances

SystemairCAD C2012-07.03.B9

Trade name

SYSTEMAIR

have been assessed according the requirements of following standard

OM-5-2011

The list of certified products is displayed at :

http://www.eurovent-certification.com

Manufacturing places

Skinnskatteberg, Sweden

SYSTEMAIR AB

is authorised to use the EUROVENT Certification mark in accordance with the rules specified in the Operational Manual

OM-5-2011

Erick MELQUIOND
Managing Director

Approval date : 2012/01/04
Re-checked on : 2012/12/11
Valid until : 2014/03/31

1 Déclaration de conformité

Fabricant

Systemair AB
Industrivägen 3
SE-739 30 Skinnskatteberg SWEDEN
Tél.: +46 222 440 00 Fax: +46 222 440 99
www.systemair.com

certifie par la présente que les produits suivants:

Centrales de traitement d'air

Topvex FR03	Topvex FR08
Topvex FR03 EL	Topvex FR08 EL
Topvex FR03 HWL/HWH	Topvex FR08 HWL/HWH
Topvex FR06	Topvex FR11
Topvex FR06 EL	Topvex FR11 EL
Topvex FR06 HWL/HWH	Topvex FR11 HWL/HWH

(La déclaration s'applique exclusivement au produit dans l'état où il a été livré et installé sur site conformément aux instructions jointes. L'assurance ne couvre pas les composants ajoutés ou les interventions effectuées ultérieurement sur le produit.)

est conforme à l'ensemble des exigences des directives suivantes

- **Directive machines 2006/42/EC**
- **Directive basse tension 2006/95/CE**
- **Directive CEM 2004/108/CE**

Les normes harmonisées suivantes sont d'application pour les parties concernées:

EN ISO 12100-1	Sécurité des machines – notions fondamentales, principes généraux de conception – Partie 1 : terminologie de base, méthodologie
EN ISO 12100-2	Sécurité des machines – notions fondamentales, principes généraux de conception – Partie 2 : principes techniques
EN ISO 14121-1:2007	Sécurité des machines – évaluation des risques – Partie 1 : Principes
EN 13857	Sécurité des machines – distances de sécurité pour les membres supérieurs ou inférieurs
EN 60 335-1	Appareils électrodomestiques et analogues – Sécurité. Partie 1: Règles générales
EN 60 335-2-40	Appareils électrodomestiques et analogues – Sécurité. Partie 2-40: règles particulières pour les pompes à chaleur électriques, les climatiseurs et les déshumidificateurs
EN 50 106	Sécurité des appareils électrodomestiques et analogues – Règles particulières pour les essais de série concernant les appareils dans le domaine d'application des normes EN 60 335-1 et EN 60967
EN 60 529	Niveaux de protection des boîtiers (code IP)
EN 61000-6-2	Compatibilité électromagnétique (CEM) – Partie 6-2: Normes génériques – Immunité des appareils en environnements industriels
EN 61000-6-3	Compatibilité électromagnétique (CEM) – Partie 6-3: Normes génériques – Émissions standards pour les environnements résidentiels, commerciaux et l'industrie légère

La documentation technique complète est disponible.

Skinnskatteberg, 31–10–2011

Mats Sándor
Directeur technique

SNPE
MATÉRIAUX ÉNERGÉTIQUES
GROUPE SNPE

Filtre HI FLO (M5 F7 F9)

9, rue Lavoisier
Le Bouchet
91710 Vert-le-Petit - France
Téléphone : 01.64.99.14.82
Télécopie : 01.64.99.14.14

PROCES-VERBAL DE CLASSEMENT DE REACTION AU FEU D'UN MATERIAU

prévu à l'article 5 de l'arrêté du 21 Novembre 2002 modifié

VALABLE 5 ANS à partir du 20/10/2009

N° 14819-09

MATERIAU PRESENTE PAR : Camfil Farr
Usine de St Martin Longueau
ZI Route d'Avrigny - BP 80225
60722 PONT Sainte MAXENCE CEDEX
FRANCE

REFERENCE COMMERCIALE :

DESCRIPTION SOMMAIRE : 1

INFORMATIONS
CONFIDENTIELLES

NATURE DES ESSAIS : Essai au brûleur électrique

CLASSEMENT :

M1

DURABILITE DU CLASSEMENT : **non limitée a priori.**

Compte tenu des critères résultant des essais décrit dans le rapport d'essai annexé n° : 14819-09 du 20/10/2009
Ce procès verbal atteste uniquement des caractéristiques de l'échantillon soumis aux essais et ne préjuge pas des caractéristiques de produits similaires. Il ne constitue donc pas une certification de produits au sens de l'article L. 115-27 du code de la consommation et de la loi du 3 juin 1994.

Au Bouchet, le **20/10/2009**

Chef du Laboratoire
"Essais au Feu"
B.HEUZE

Responsable de l' essai

D. DI EGIDIO

Nota : sont seules autorisées les reproductions intégrales et par photocopie du présent procès-verbal de classement ou de l'ensemble procès-verbal de classement et rapport d'essai annexé.

AFAQ ISO 9001 ISO 14001

Systemair AB
Industrivägen 3
SE-739 30 Skinnskatteberg
SWEDEN

Our reference:
Niclas Eliasson

Systemair AB hereby confirms:

- Systemair AB uses the product *Roxull KanalBatts 65 /Duct Batts* as insulation in Topvex Air Handling Units.

- The mineral wool insulation *Roxull KanalBatts 65 /Duct Batts* from the manufacturer Roxull is approved as a non combustible material according to the European standard EN ISO 1182.

Niclas Eliasson
Product Manager AHU Compact

Traduction
(Bruno MORICE Systemair France) :

Systemair confirme les points suivants:

- *Systemair AB utilise le produit Roxull KanalBatts 65 /Duct Batts comme isolant dans les Centrales de traitement d'air TOPVEX.*
- *La laine minérale Roxull KanalBatts 65 /Duct Batts du fabricant Roxull est approuvé comme matériau non combustible suivant le standard européen EN ISO 1182.*

Niclas Eliasson
Responsible produit centrals de traitement d'air compactes

EFiC
European Fire & Conductivity Laboratory

DANAK
TEST Reg. nr. 341
E.U. Reg. nr. 1142
Date 2009-05-18
Report no. GD-TEC-09-5258
File no. 09-017

Ref: KuE/MBa

Fire technical evaluation report

Rockwool Kanalbatts 65

1. Name of Sponsor

Rockwool Scandinavia
Hovedgaden 501
2640 Hedehusene

2. Name of manufacturer

The manufacturer is the same as the sponsor.

3. Scope

To evaluate the Reaction to Fire properties for Rockwool Kanalbatts 65.
The evaluation is made on the basic of Reaction to Fire tests on other Rockwool products with similar density and binder content and with the same type of glass fibre vlies covering and glue.

4. Reference to previous tests

The following test reports have been used in this evaluation:

EFIC-F-0014, file no. 02-005, issued on 2002-03-08
EFIC-F-0010, file no. 02-005, issued on 2002-03-04
RDQ-04-3120, file no. 04-016, issued on 2004-06-03

5. Items to be evaluated

The product is “Rockwool Kanalbatts 65”.

The results relate only to the items tested
The test report should only be reproduced in full, in extracts only with a written agreement with EFiC.

Hovedgaden 584, DK-2640 Hedehusene. Phone +45 2428 9354, Fax. +45 4656 1525. E-mail: EFiC@ EFiC.dk

The product is made in 3 different versions:

- Art 500178, Diff 000
- Art 500178, Diff 101 and
- Art 500178, Diff 258

The product Art: 500178, Diff 000 is composed of stone wool without any covering.

The products Art: 500178, Diff 101 and Art: 500178, Diff 258 is composed of a core made of stone wool with a glass fibre vlies on one surface. The difference between the two products is the kind of adhesive (glue or binder) used for the vlies.

The specification of the product given by the sponsor was:

Density (core material):	65 kg/m³ or 100 kg/m³ depending on thickness
Area weight front fleece:	62 g/m²
Area weight front glue;	42 g/m² (dry weight)
Area weight front binder:	5 g/m² (dry weight)

6. Test Standard

Following a request from the sponsor, the evaluations are performed according to the following standards:

- EN/ISO 1716:2002
  Reaction to fire tests for building products – Determination of the gross calorific value

- EN/ISO 1182: 2002
  Reaction to fire tests for building products – Non-combustibility test

- EN 13823 :2002
  Reaction to fire tests for building products – excluding floorings – exposed to the thermal attack by a Single Burning Item

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7. Evaluation results

EN/ISO 1716:2002:

Test on core material: (EFIC-F-0014, file no. 02-005, issued on 2002-03-08)

Test no.	Calorific value (PCS)	Calorific value (PCS) MJ/m² (using the worst case area weight of 3000 g/m²)
1	1.12 MJ/kg	3.36
2	1.15 MJ/kg	3.45
3	0.99 MJ/kg	2.97
Avg.	**1.09 MJ/kg**	**3.26**

Test on glass fibre vlies: (EFIC-F-0014, file no. 02-005, issued on 2002-03-08)

Test no.	Calorific value (PCS) MJ/kg	Calorific value (PCS) MJ/m² (using the area weight of 62 g/m²)
1	3.79 MJ/kg	0.24 MJ/m²
2	3.68 MJ/kg	0.23 MJ/m²
3	3.71 MJ/kg	0.23 MJ/m²
Avg.	**3.73 MJ/kg**	**0.23 MJ/m²**

Test on the glue after drying at 105°C for 24 hours: (RDQ-04-3120, file no. 04-016, issued on 2004-06-03)

Test no.	Calorific value (PCS)	Calorific value (PCS) MJ/m² (using the area weight of 42 g/m²)
1	12.6 MJ/kg	0.53 MJ/m²
2	12.7 MJ/kg	0.53 MJ/m²
3	12.7 MJ/kg	0.53 MJ/m²
Avg.	**12.7 MJ/kg**	**0.53 MJ/m²**

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Calculation on binder glue: (EFIC-F-0014, file no. 02-005, issued on 2002-03-08)

The calorific value of the binder calculated from the calorific value of the wool and the combustible content measured according to NT Fire 038 gives:

(1.09MJ/kg * 100 %) / 3.9 % = 27.9 MJ/kg

This gives a calorific value pr. m² of binder glue:

(27.9 MJ/kg / 1000) * 5 g/m² = 0.14 MJ/m²

Calculation on product:

Product: Art 500178, Diff 101

Vlies:	0.23 MJ/m²
Binder for vlies:	0.14 MJ/m²
Wool (worst case):	3.26 MJ/m²
Total:	**3.63 MJ/m² => (3.63 MJ/m² / 3.067 kg/m²) = 1.18 MJ/kg**

Product: Art 500178, Diff 258

Vlies:	0.23 MJ/m²
Glue for vlies:	0.53 MJ/m²
Wool (worst case):	3.26 MJ/m²
Total:	**4.02 MJ/m² => (4.02 MJ/m² / 3.104 kg/m²) = 1.30 MJ/kg**

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EN ISO 1182:2002:

Before testing the core material, the covering material was removed.

In the tables is shown the initial furnace temperature, the maximum temperature rise for the furnace thermocouple, the duration of sustained flaming and the mass loss.

Results on core material with density of 100 kg/m^3: (EFIC-F-0010, file no. 02-005, issued on 2002-03-04)

Test no.	Initial furnace temperature °C	Furnace Temperature Rise °C	Time of sustained flames. Sec.	Mass Loss. %
1	747	20.5	0	3.7
2	748	16.4	0	3.9
3	749	12.5	0	3.4
4	749	22.4	0	3.7
5	748	18.5	0	3.4
Avg.	**748**	**18.1**	**0**	**3.6**

Results on core material with density of 65 kg/m^3: (EFIC-F-0014, file no. 02-005, issued on 2002-03-28)

Test no.	Initial furnace temperature °C	Furnace Temperature Rise °C	Time of sustained flames. Sec.	Mass Loss. %
1	749	11.2	0	3.4
2	748	15.9	0	3.6
3	750	9.1	0	3.1
4	750	16.5	0	3.2
5	748	5.6	0	4.1
Avg.	**749**	**11.7**	**0**	**3.5**

The results relate only to the items tested
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EN 13823:2002:

The specimens were mounted with screws and washers to a 12mm substrate without a void.

Substrate was a Calcium silicate board as specified in EN 13238.
When tested there were joints both horizontal and vertical as described in the standard.

In the table are shown the FIGRA value, the total heat release (THR), the observation of lateral flame spread (LFS), the SMOGRA value, the total smoke production (TSP) and the observation of flaming droplets/particles (FDP).

Product: Art 500178, Diff 258

Results from report RDQ-04-3120, file no. 04-016, issued on 2004-06-03:

Test no.	FIGRA 0.2MJ/0.4MJ W/s	THR MJ	LFS Yes/No	SMOGRA M^2/s^2	TSP M^2	FDP <=10s/>10s Yes/No
1	0 / 0	0.8	No	1	36	No / No
2	0 / 0	1.0	No	0	30	No / No
3	0 / 0	0.8	No	0	17	No / No
Avg.	**0 / 0**	**0.9**	**No**	**0**	**28**	**No / No**
Euro class A1	**< 20**	**< 4.0**	**No**	**< 30**	**< 50**	**No / No**

These test results are clearly below the limitations for the A1 classification.

The results relate only to the items tested
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Results from EFIC-F-0010, file no. 02-005, issued on 2002-03-04:

Product: Art 500178, Diff 101

Test no.	FIGRA 0.2MJ/0.4MJ W/s	THR MJ	LFS Yes/No	SMOGRA M^2/s^2	TSP M^2	FDP <=10s/>10s Yes/No
1	0 / 0	0.7	No	0	23	No / No
2	0 / 0	0.9	No	0	23	No / No
3	0 / 0	0.3	No	0	22	No / No
Avg.	**0 / 0**	**0.6**	**No**	**0**	**23**	**No / No**
Euro class A1	**< 20**	**< 4.0**	**No**	**< 30**	**< 50**	**No / No**

These test results are clearly below the limitations for the A1 classification.

8. Fire technical evaluation

According to the following reports:
EFIC-F-0014, file no. 02-005, issued on 2002-03-08
EFIC-F-0010, file no. 02-005, issued on 2002-03-04
RDQ-04-3120, file no. 04-016, issued on 2004-06-03
which covers Rockwool products with similar density and binder content and with the same type of glass fibre vlies covering and glue, the product "Rockwool Kanalbatts 65" satisfies the criteria's mentioned in clause 10.8.2 in EN 13501-1 "Fire classification using test data from reaction to fire test" for being classified as **A1**.

Kurt Ejlersen
Senior Fire Technician

/

Martin Bagge
Manager, Testing & Quality

The results relate only to the items tested
The test report should only be reproduced in full, in extracts only with a written agreement with EFiC.

DANAK (Danish Accreditation)

DANAK was established in 1991 in pursuance of the Danish Act No. 394 of 13 June 1990 on the promotion of Trade and Industry.

The requirements to be met by accredited laboratories are laid down in the "Danish Agency for Trade and Industry's" ("Erhvervsfremme Styrelsen's") Statutory Order on accreditation of laboratories to perform testing etc., and GLP-inspection. The statutory order refers to other documents where the criteria for accreditation are specified further.

The standards DS/EN ISO/IEC 17025 "General requirements for the competence of testing and calibration laboratories" and DS/EN 45002 "General criteria for the assessment of testing laboratories" describes fundamental criteria for accreditation. DANAK uses guidance documents to clarify the requirements in the standards, where this is considered to be necessary. These will mainly be drawn up by the "European co-operation for Accreditation (EA)" or the "International Laboratory Accreditation Co-operation (ILAC)" with a view to obtaining uniform criteria for accreditation world wide. In addition, DANAK draws up Technical Regulations with specific requirements for accreditation that are not contained in the standards.

In order for a laboratory to be accredited it is, among other things, required:

- that the laboratory and its personnel are not subject to any commercial, financial or other pressures, which might influence their technical judgement,
- that the laboratory operates a documented quality system,
- that the laboratory has at its disposal all items of equipment, facilities and premises required for correct performance of the service that it is accredited to perform,
- that the laboratory management and personnel have technical competence and practical experience in performing the service that they are accredited to perform,
- that the laboratory has procedures for traceability and uncertainty calculations,
- that accredited testing or calibration is performed in accordance with fully validated and documented methods,
- that the laboratory keeps records which contain sufficient information to permit repetition of the accredited test or calibration,
- that the laboratory is subject to surveillance by DANAK on a regular basis,
- that the laboratory shall take out an insurance, which covers liability in connection with the performance of accredited services.

Reports carrying DANAK's logo are used when reporting accredited services and show that these have been performed in accordance with the rules for accreditation.