NATIONAL TECHNICAL UNIVERSITY OF ATHENS

Testing
Certificate No. 775-3

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CLASSIFICATION OF FIRE RESISTANCE
in accordance with EN 13501-2:2016

Manufacturer:	**KOLLIAS LTD, 3rd km KATERINI – THESSALONIKI NATIONAL ROAD, 60100 KATERINI, GREECE, Tax. Reg. Number: 095675664** **Tel : +30-23510.36036, fax: +30-23510.45630, Email: info@kolliasdoors.com**
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Prepared by	**Laboratory of Strength and Materials National Technical University of Athens**
Notified Body No:	**NB 2739**
Product Name	**Fire Rolling Shutter** commercial name **"RSM-FR 100"**
Classification Report No.:	**01-C Rev. 1 /2022**
Date of Issue	**September 27 2022**

Classification Reports: **2** Copy No: **2**

Distribution List:

Copy No. 1: Laboratory of Strength and Materials, NTUA, Athens, Greece (electronic version)
Copy No. 2 KOLLIAS LTD, Katerini 60100, Greece (electronic version)

1. INTRODUCTION

This classification report defines the classification assigned to the **Fire Rolling Shutter** under the commercial name **"RSM-FR 100"**, for integrity and thermal insulation, in accordance with the procedures described in EN 13501-2:2016

1.1 Revision Information

This is a revised version of his report. This version supersedes all previous versions of the report that are hereby withdrawn. Details on the changes can be found in the tables below.

Issue	Date of Issue	Report No.
First Issue	April 15 2022	**01-C / 2022**
First revision	September 27 2022	**01-C-Rev.1 / 2022**

1.1.1 First Revision Information

Chapter of Revision	Reason for revision
Test- report format	Report Format changed to issue No 2 for Clarification of following points. Differentiation between manufacturer and sponsor, clarification of report issuing date, addition of distribution list.
§1.1	Insertion of section "Revision Information"
Table in §3.2	Corrected time values (with 2 decimal places)

2. DETAILS OF CLASSIFIED ELEMENT

2.1. General

The specimen is a **Rolling Shutter doorset**, exposed to flame from one of its sides. Its function consists of maintaining its integrity and thermal insulation features against fire, in conformity with section 5 of EN 13501-2:2016.

2.2. Description

The element, **Fire Rolling Shutter** under the commercial name **"RSM-FR 100"**, is fully described in the test report listed in 3.1.

3. TEST REPORTS and RESULTS IN SUPPORT OF the CLASSIFICATION

3.1. Test Reports/extended application reports

Name of Laboratory	Sponsor	Test Report Ref. No	Standards
Laboratory of Strength and Materials School of Applied Mathematical and Physical Sciences NTUA	**KOLLIAS LTD**	**01-T-Rev. 2 / 2022**	EN 1634-01:2014 + A1:2018

Decision Rule: Measurement estimates, T, are obtained with a known standard uncertainty, u(T). A decision rule is established as follows: the measured result T is compared to a single declared value L (in minutes), then it is considered compliant, for a 95% confidence level, when: T>L and T-L ≥ 2u (where "u = 1 secs = 1/60 min" is the typical uncertainty of the result). In all other cases the sample is considered non-compliant beyond any doubt.

3.2. Table of results

Temperature-time curve	T=345 log10(8 t+1)+20
Exposure conditions	 Barrel and supporting components fixed on the face of the supporting wall on the unexposed side to the exterior of the furnace. The furnace opening covered by the specimen had 2.28 m width and 2.14 m height
Number of exposed faces	1 (rolling shutter doorset)
Supporting Construction	Clay brick Masonry wall (density: 1300kg/m^3, wall thickness: 250 mm)

CRITERION	TIME (min)	RESULT
Integrity (E)		
• Cotton pad	**134**	* Not Determined
• Gap Gauge		
Ø 6 mm	**134**	No Failure
Ø 25 mm	**134**	No Failure
• Sustained Flaming >10 secs	**134**	No Failure/
Insulation (I)		
• Average Temperature	**60.83**	No Failure
• Max Temperature	**60.83**	No Failure
Heating was terminated after 134.5 minutes in concurrence with the client		

***** During the 134.5 minutes of testing no flame or hot gases leakage were observed, thus no cotton pad checks were needed.

4. CLASSIFICATION

4.1. Reference of Classification

The classification of the tested element is carried out in accordance with Clause 7 of EN13501-2:2016

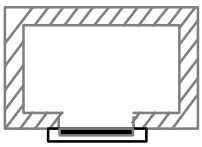
4.2. Classification

The element :

«Fire Rolling Shutter

UNDER THE COMMERCIAL NAME **"RSM-FR 100"**»,

is classified as follows:

	**EI_2 60**	**CATEGORY A**
	E 120	**CATEGORY B**

5. FIELD OF DIRECT APPLICATION

5.1. General

Any significant deviation with respect to size, construction details, load stresses, edge or end conditions other than those allowed under the field of direct application in the relevant test method is not covered by this report.