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- ORGANISMO NOTIFICATO DIRETTIVA PRODOTTI DA COSTRUZIONE 89/106 CEE 1988
- ORGANISMO NOTIFICATO DISPOSITIVI PROTEZIONE INDIVIDUALE DIR. 89/686 CEE
- ORGANISMO NOTIFICATO DIRETTIVA NAVALE MED 96/98 EC
- MEMBRO EGOLF e UNIFER
- RICONOSCIUTO USCG ADMINISTRATION
- RICONOSCIUTO SNCF FERROVIARIO
- RICONOSCIUTO CESIFER
- AUTORIZZAZIONE BHF CALIFORNIA
- AUTORIZZATO MINISTERO INTERNO DM. 26.3.85
- ACCREDITATO ACCREDIA N. 0086
- AUTORIZZAZIONE ENAC - ENTE NAZIONALE AVIAZIONE CIVILE CIT 1013/L
- RICONOSCIUTO MED 96/98 EC - BUREAU VERITAS - DNV - LLOYD'S REGISTER
- PROVE SU AUTOVEICOLI AI SENSI DELLA DIRETTIVA 95/28 CE



Spettabile
G.D. DORIGO S.p.A.
Via G. Pascoli, 23
31053 - PIEVE DI SOLIGO (TV)

Prato, 11/04/2012
Rif. 455/12/AC



Vi rimettiamo in allegato ns. Supplemento in lingua inglese n. 1 del Rapporto di Classificazione relativo al Vs. materiale denominato:
Please find enclosed our Supplement n. 1 in english language of the Classification Report relative your material denominated:

- **FIRE S1** (Test Report N. 37/U/11-98FR)

Distinti saluti,
Best Regards

LAPI S.p.A.



**SUPPLEMENT N. 1 TO CLASSIFICATION REPORT OF FIRE RESISTANCE TEST
OF DOORSET NAMED
FIRE S1**

FOR

**G.D. DORIGO S.p.A.
Via G. Pascoli, 23 – 31053
Pieve di Soligo (TV)**

**TEST REPORT
N. 37/U/11-98FR**

1. Introduction

This assessment of fire resistance test defines the classification assigned to doorset named **FIRE S1** according with procedures provided by EN 13501-2:2007.

2. Details of the specimen

2.1 Type of function

The doorset named **FIRE S1** is a single wooden hinged door. It has the function of fire resistance with respect to the performance characteristics listed in paragraph 5 of EN 13501-2:2007.

2.2 Description

The doorset named **FIRE S1** is completely described in test report, referred to in paragraph 3, which is a part of this assessment.

3. Test Report and Test Results to support this assessment

This assessment is supported by following test report:

Il presente certificato di prova è supportato dal seguente rapporto di prova:

TEST REPORT N. 37/U/11-98FR of doorset named **FIRE S1**
for

**G.D. DORIGO S.p.A.
Via G. Pascoli, 23 – 31053
Pieve di Soligo (TV)**

issued by

**LAPI Laboratorio Prevenzione Incendi SpA
Via della Quercia, 11 - 59100 PRATO (PO)**

DATE OF TEST: 09/02/2011 – Unexposed hinges side, exposed hinges side

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This Supplement is the English version of Classification Report N. 37/U/11-98FR issued on 18/03/2011 to which
reference has to be made in case of every kind of dispute.

Exposure condition:

- Temperature/time curve: standard (heating conditions and furnace meet as indicated in EN 1363-1, p.ti 5.1.1, 5.1.2 e 5.2.1)
- Exposure direction: 09/02/2011 – unexposed hinges side (opening opposite the furnace), exposed hinges side (opening towards the furnace)
- Numbers of exposed surfaces: 2
- Supporting conditions: standard masonry supporting construction total thickness 100 mm

Test results:

- Integrity:
 - Cotton pad ignition: Not detected
 - Persistent flaming: Not detected
 - Gap gauge passage: \varnothing 6 mm: Not detected
 - Gap gauge passage: \varnothing 25 mm: Not detected
- Insulation
 - Average temperature increase on unexposed side more than 140° C: not detected (exposed hinges side), not detected (unexposed hinges side);
 - Maximum temperature increase on unexposed side more than 180° C: not detected (exposed hinges side), not detected (unexposed hinges side);
 - Maximum temperature increase on unexposed side more than 180° C at 25 mm from visible edges of the leaf: not detected (exposed hinges side), not detected (unexposed hinges side);
 - Maximum temperature increase on unexposed side more than 180° C at 100 mm from visible edges of the leaf: not detected (exposed hinges side), not detected (unexposed hinges side);
 - Average temperature increase on unexposed side more than 140 °C and maximum more than 180 °C on routing: Detected at 63° minute;
 - Maximum temperature increase on unexposed side more than 180° C on frame: not detected (exposed hinges side), not detected (unexposed hinges side);
- Selfclosing: presence and function of the automatic closing device: verified

4. Classification and field of direct application

4.1 Reference for classification

This assessment has been performed according with paragraph 7.5.5 of EN 13501-2:2007.

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4.2 Classification

The doorset named **FIRE S1** is classified according with following in accordance with the following combinations of performance requirements and classes. Other classifications are not allowed.

EI₂60, EI₁60

4.3 Field of direct application of results

The doorset named **FIRE S1** has the following field of direct application according with EN 13501-2:

Limits set by standard UNI EN 1634-1	Reference	Admissible variations
Specific limitation for timber doors	13.2.2 a)	The leaf thickness may be increased to ≥ 60 mm. Thickness and density of the leaf could be increased but the leaf weight couldn't increased more than 25%. The panel composition and the resin type must not change with respect to those of the sample subjected to testing. The density may be increased but not reduced. Frame cross section dimensions and timber density may be increased but not reduced (frame cross section dimensions 100x50 mm density 710 kg/m ³ (Ash) and 450 kg/m ³ (Fir).
Paint	13.2.3 a)	Leaves and frames may be varnished/painted.
Decorative laminates	13.2.3 b)	Decorative laminates and wooden veneers of thicknesses up to 1,5 mm may be applied to the faces but not to the edges. The dimensions of the routing on the side to push may not be increased with respect to the tested item (50x4 mm). The dimensions of the stainless steel insert may not increased with respect to the tested item (section 6x2 mm and length 675 mm).
Frames	13.2.4	The number of anchors between frame and liner may be increased by a value ≥ 5 for the uprights and ≥ 3 for upper transom, while the spacing between screws may be reduced but not increased.
Hardware	13.2.5	The number of pieces involved with movement, like locks, spring latches, hinges, active and fixed bolts, may be increased but not reduced. The door must have a door closing device.
Other modification	13.3.3.2 b) 13.3.3.2 d)	In the case of smaller door sizes, positioning of pieces involved with movement (latch, hinges, fixed and active bolts) must remain as on the item tested or may be reduced by the same percentage as is sample size. The numbers, sizes, positions, and orientation of each joint in the wooden frame of the leaf must not be changed.
Supporting construction	13.5.2 13.5.4	The test specimen may be assembled on masonry supporting construction with thickness ≥ 100 mm and density ≥ 800 kg/m ³ .

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		The result of the test conducted on the rigid normalized supporting structure is applicable to the same door mounted on a flexible support structure on condition that the type of anchoring be suitable for the type of construction.
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Table 1: Field of direct application of results

Permissible size variations provided by UNI EN 1634-1 Table B1	Performance criterion required	Category A	Category B
Hinged or pivoted doorset	El ₁ , El ₂	Unlimited size reduction for tested doorset. Leaf dimensions: 1022x2306(h) mm	-----

Table 2: Limits of size variation

4.4 Rules to modify supporting construction

The result of the test conducted on doorset named **FIRE S1** is applicable to the same door mounted on a flexible support structure. The applicability of the results to other buildings of support must be extended for the application.

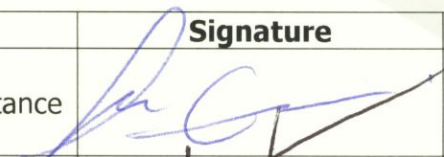
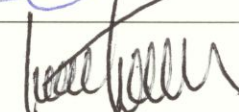
5. Limits

5.1 Restrictions

There are no restrictions on length of validity of this test certificate.

5.2 Advertising

This test certificate does not constitute approval or certification of products.

Test Assessment	Name	Signature	Date
Prepared by:	Dr. Luca Ermini Director of Fire Resistance Laboratory		11/04/2012
Verified by:	Legal Representative Dr. Massimo Borsini		11/04/2012

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SUPPLEMENT N.1 OF TEST REPORT N. 37/U/11-98FR

PLACE AND DATE OF ISSUING	Prato, 10/06/2011
SPONSOR	G.D. Dorigo S.p.A. Via G. Pascoli, 23 31053 – Pieve di Soligo (TV)
OBJECTIVE	To determine the fire resistance performance in accordance within the standards UNI EN 1634-1, UNI EN 1363-1
SPECIMEN	Single wooden hinged door assembled in a standard masonry supporting construction.
TRADE NAME	FIRE S1
DATE OF TEST	09/02/11

1. Introduction

This Test Report is issued in accordance with Articles 1 and 13 of Decree of the Ministry of the Interior March 26, 1985 "Procedures and requirements for approval and entry in the lists of institutions and laboratories of the Ministry of the Interior referred to the Law 7/12/1984 n.818" and under Articles 2 and 4 of Decree of the Ministry of the Interior June 21, 2004 "Technical methods and procedures for classifying the fire resistance of doors and other elements of closure".

This report describes the mounting method, test conditions and results obtained by test specimen described as follows.

Test were been made according with standards UNI EN 1634-1 ed. 2009, UNI EN 1363-1. ed. 2001.

This Supplement has been issued without test repetition: it is the English version of Test Report N 37/U/11-98FR issued on 18/03/11 to which reference has to be made in case of every kind of dispute.

This test report consist of 35 pages and it can't be may not be reproduced and / or if not fully advertised.

2. Constructive details of the test specimen

2.1 Generality

The description of the test specimen is based on a detailed description provided by the producer.

The technical staff of the laboratory verified the accuracy information of the added specimen provided by the sponsor.

The technical staff of the laboratory freely chose the specimens to be tested and to be verified.

2.2 Principal dimensions

The technical staff of the laboratory has verified the dimensions in table 1:

Wall hole (LxH)	1130 x 2365 mm
Nominal width of the frame	1100 mm
Nominal height of the frame	2350 mm
Width of clear opening	1000 mm
Height of clear opening	2300 mm
Leaf thickness	

Table 1: Principal dimensions of the test specimen





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2.3 Weight of the specimen

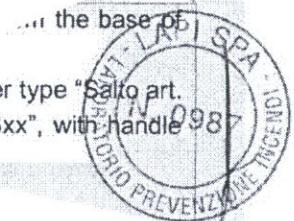
At the end of the conditioning, technical staff of the laboratory has verified the following values:

Leaf weight (with hardware): 81,5 Kg
 Frame weight (with hardware): 14,5 Kg

2.4 Components

Liner
Frame
Leaf
Accessories

n. 1 combiner lock/latch kit type "SALTO art. Aelement", composed by reader type "Salto art. AEi1xx", lock/latch type "Salto art. LE7E37xx", handle type "Salto art. R1Sxx", with handle positioned at height from the base of the leaf of 900 mm;



7. Test Results

Reference to standard UNI EN 1634-1		Performance criterion	Description	Result	
				Exposed hinges	Not exposed hinges
11.1	Test specimen	Integrity	Cotton pad	No ignition	No ignition
			Gap gauge 6 mm	-----	-----
			Gap gauge 25 mm	-----	-----
			Persistent flaming	-----	-----
11.2.5		Insulation (I ₁)	-----	-----	
11.2.3, 11.2.4		Insulation (I ₂)	63° minute	-----	
11.3		Radiation	Not required		
9.1.2	Leaf	Temperatures at failure of Insulation (I ₂)	ΔT mean (140°C)	75 °C	72 °C
			ΔT max (180°C)	89 °C	79 °C
			ΔT max a 100 mm (180°C)	74 °C	78 °C
			ΔT max a 25 mm (180°C)	84 °C	68 °C
	Routing		ΔT mean (140°C)	145 °C	-----
			ΔT max (180°C)	167 °C	-----
	Frame		ΔT max (180°C)	31 °C	36 °C
9.1.2	Leaf	Temperatures at the end of the test ^(*)	ΔT mean (140°C)	77 °C	73 °C
			ΔT max (180°C)	92 °C	80 °C
			ΔT max a 100 mm (180°C)	78 °C	79 °C
			ΔT max a 25 mm (180°C)	83 °C	68 °C
	Routing		ΔT mean (140°C)	164 °C	-----
			ΔT max (180°C)	183 °C	-----
	Frame		ΔT max (180°C)	31 °C	36 °C

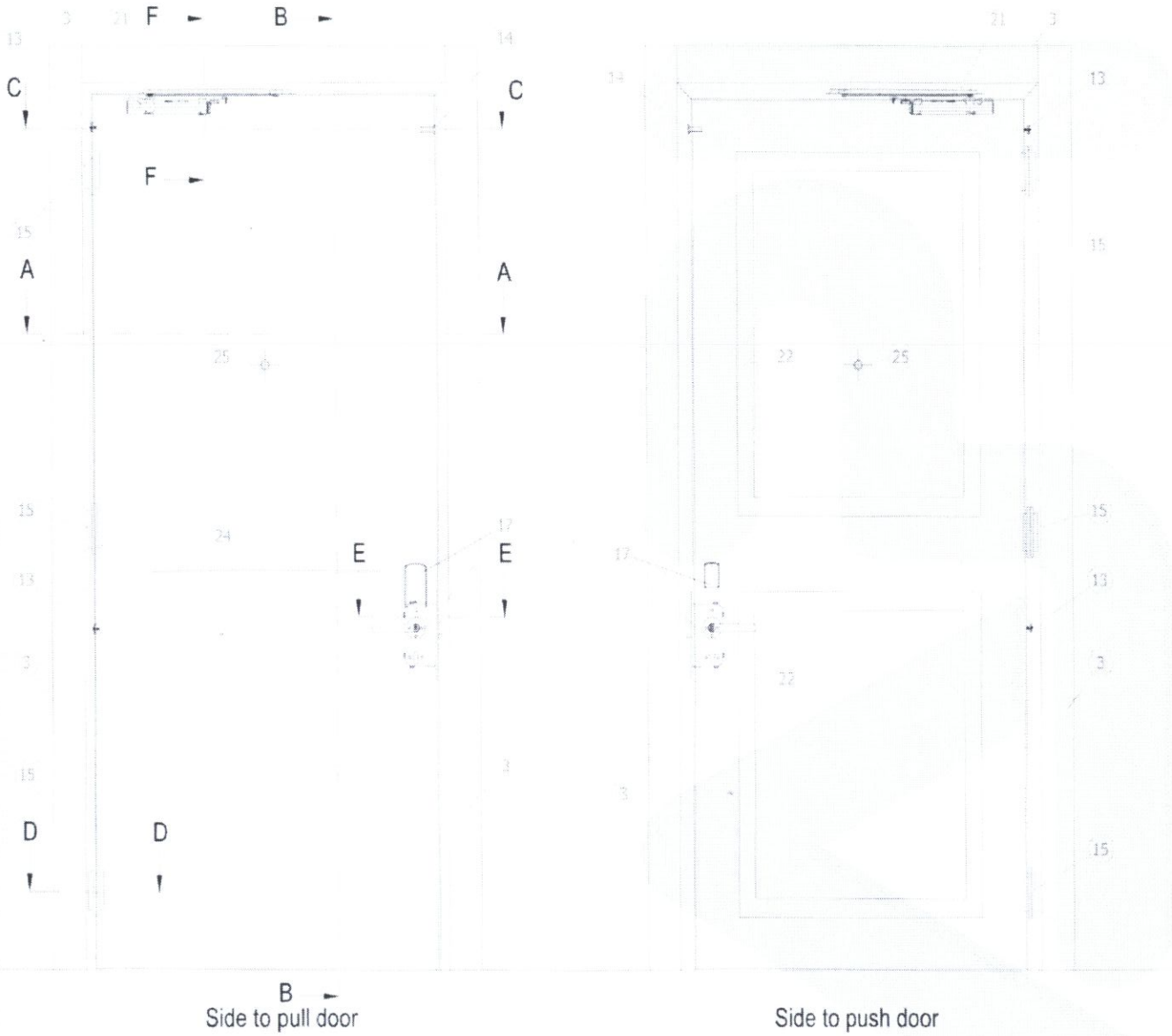
(*)Test discontinued at 64° minute.

Table 9: Test results

Because of the nature of fire resistance testing and the consequent difficulty in quantifying the uncertainty of measurement of fire resistance, it is not possible to provide a stated degree of accuracy of the result.

The photos present inside the test report show the test specimen.





Drawing 2: Unexposed side view

