



# Certificate of Compliance

This certificate is issued for the following:

**APPROVAL OF KS103SSF, KS103MSF AND KS110CTF WALL PANELS AS  
CLASS 1 EXTERIOR WALL PANELS**

**Prepared for:**

Izopoli Yapi Elemanlari Taah San ve Tic AS  
Adana Yumurtalik Serbest Bolgesi  
01920 Ceyhan/Adana, Turkey

FM Approvals Class: 4881

Approval Identification: 3047576      Approval Granted: 5/17/2013

Said Approval is subject to satisfactory field performance, continuing follow-up Facilities and Procedures Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.

A handwritten signature in dark ink that reads 'Cynthia E. Frank'.

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Cynthia E. Frank  
Asst. Vice President, Group Manager  
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Norwood, MA 02062



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# APPROVAL REPORT

## APPROVAL OF KS103SSF, KS103MSF AND KS110CTF WALL PANELS AS CLASS 1 EXTERIOR WALL PANELS

Prepared for:

**Izopoli Yapi Elemanlari Taah San ve Tic AS  
Adana Yumurtalik Serbest Bolgesi  
01920 Ceyhan/Adana, Turkey**

**Project ID: 3047576**

**Class: 4881**

**Date of Approval: 5/17/2013**

**Authorized by:**

*Cynthia E Frank*

Cynthia E. Frank, AVP, Group Manager Materials

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**APPROVAL OF KS103SSF, KS103MSF AND KS110CTF WALL PANELS  
AS CLASS 1 EXTERIOR WALL PANELS**

**from**

**IZOPOLI YAPI ELEMANIARI TAAH. SAN. VE TIC. A.S  
ADANA YUMURTALIK SERBEST BOLGESI  
01920 CEYHAN/ADANA, TURKEY**

**I INTRODUCTION**

1.1 Izopoli Yapi Elemaniari Taah. San. Ve Tic. A.S submitted their KS103SSF, KS103MSF and KS110CTF wall panels to determine if they meet the approval requirements of Standard class number 4881 in the category of Class 1 exterior wall panels. The panels can be installed both vertically and horizontally.

1.2 This Report may be reproduced only in its entirety and without modification.

**1.3 Standard:**

<b>Title</b>	<b>Class Number</b>	<b>Date</b>
Class I Exterior Wall Systems	4881	November, 2007

1.4 All testing was conducted under FM Approvals Project ID 3043355, 3026353 and 3034123 and was released for use in this program. Static and cyclic air pressure differential, simulated hail testing and comparative tensile withdrawal was conducted under Project ID 3043355. UBC 26-3 room fire testing was conducted under project ID#3034123. Apparent density, heat of combustion, ignition residue, surface burning characterization and flammability characterization testing was conducted under project ID#3026353 and is cited in project ID#3034123.

1.5 Examination shows KS103SSF, KS103MSF and KS110CTF wall panels meet the approval requirements of Standard class number 4881 in the category of Class 1 exterior wall panels.

1.6 **Listings:** The tested constructions meet the Approval criteria of FM Approvals when installed as specified in the **CONCLUSIONS** of this report and will be listed in Approval Guide, an internet-based resource of FM Approvals.

**II DESCRIPTION**

2.1 All panels included in this report are described in the Wall-Ceiling Construction/Roof Construction (Class Number 4880) section of Approval Guide.

2.2 Proprietary formulations and drawings are on file at FM Approvals.

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**III EXAMINATIONS AND TESTS**

- 3.1 All testing was conducted under FM Approvals Project ID 3043355, 3026353 and 3034123 and was released for use in this program. Static and cyclic air pressure differential, simulated hail testing and comparative tensile withdrawal was conducted under Project ID 3043355. UBC 26-3 room fire testing was conducted under project ID#3034123. Apparent density, heat of combustion, ignition residue, surface burning characterization and flammability characterization testing was conducted under project ID#3026353 and is cited in project ID#3034123.
- 3.1.1 Testing conducted was as required by the **Standard** referenced in paragraph 1.3.
- 3.1.2 All components incorporated into test samples were selected by FM Approvals personnel. Test samples were prepared by, or under the supervision of, FM Approvals personnel.
- 3.1.3 All data is on file at FM Approvals under project IDs 3047576, 3043355, 3026353 and 3034123.

**IV MARKING**

- 4.1 The manufacturer shall mark each individual panel (or each pallet or bundle of panels), each package of plates, and each package of screws with at least one label containing, at minimum, the manufacturer's name and product trade name. In addition, each package or container must be marked with the Approval Mark of FM Approvals.
- 4.2 Upon completion of an installation, the manufacturer shall attach a permanent, corrosion resistant plate to the exterior of the building. The name plate shall be visible from ground level. At a minimum the name plate shall bear the manufacturer's name, product trade name, date of construction, the Approval Mark of FM Approvals and the applicable ratings for fire, wind and hail.
- 4.3 With the exception of the nameplate installed on the exterior of the building after completion, markings denoting FM Approval shall be applied by the manufacturer only within and on the premises of manufacturing locations which are under the FM Approvals Facilities and Procedures Audit program.
- 4.4 The manufacturer agrees that use of the FM Approvals name or Approval Mark is subject to the conditions and limitations of the FM Approval. Such conditions and limitations must be included in all references to FM Approval.

**V REMARKS**

The foam core has not been evaluated for the toxicity of the products of combustion.

**VI SURVEILLANCE AUDITS**

Izopoli Yapi Elemaniari Taah. San. Ve Tic. A.S panel production facility in Adana, Turkey is subject to periodic audit inspections to determine that the quality and uniformity of the materials have been maintained and will provide the same level of performance as originally Approved.

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The facilities and quality control procedures in place have been found to be satisfactory to manufacture product identical to that examined and tested as described in this report.

**VII MANUFACTURER'S RESPONSIBILITIES**

- 7.1 To ensure compliance with his procedures in the field, the manufacturer shall supply to the installer such necessary instruction or assistance required to produce the desired performance achieved in the tests.
- 7.2 The manufacturer shall notify FM Approvals of any planned change in the Approved products, prior to general sale or distribution, using Form 797, Approved Product Revision Report.

**VIII DOCUMENTATION**

The following document describes Izopoli Yapi Elemaniari Taah. San. Ve Tic. A.S wall and ceiling panels is filed under project ID 3047576:

Document	Issue or Revision	Description
Surveillance Audit Manual for Izopoli Yapi Elemaniari Taah. San. Ve Tic. A.S @ Adana, Turkey	May, 2013	audit manual

**IX CONCLUSIONS**

- 9.1 Test results show KS103SSF, KS103MSF and KS110CTF wall panels meet the requirements of FM Approvals Standard 4881 in the category of Class 1 exterior wall and panels with the following ratings and assembly details:
  - 9.1.1

Wall Panel	Thickness/ Securement	Width	Max Height	Hail Resistance Rating	Wind Load Rating & Zone	Max Support Steel Spacing	Min Support Steel Thickness	Min Support Steel Yield Stress
KS103SSF, KS103MSF	1.6 to 4.7 in. (40 to 100 mm)	3.3 ft (1.03 m)	no height restriction	Class S (severe)	Class +30/-42 Zone H	78 ¾ in. (2 m)	0.079 in. (2.0 mm)	70 ksi (450 MPa)

KS103SSF and KS103MSF wall panels – steel supports, minimum 0.079 in. (2.0 mm) thick and minimum 70 ksi (450 MPa) yield stress, spaced maximum 78 ¾ in. (2 m) on center. KS103SSF with and KS103MSF wall panels, consist of minimum 0.016 in. (0.40 mm) thick interior and 0.016 in. (0.40 mm) exterior coated galvanized steel facers with a 1.6-3.9 in. (40-100 mm) thick IPN core foam system. Panels are available 40.6 in. (1030 mm) wide with various lengths. Panel side joints consist of overlapping internal and external profiles. Facer profiles are Superlambri, Microlambri, and Smooth Lambri and are secret-fastened every panel joint / girt interface (78 ¾ in. (2 m) on center) with two Ejot LS5.5 A15 or two SFS SD3 S16 5.5 fasteners.

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9.1.2

wall panel	thickness/ securement	width	max height	hail resistance rating	wind load rating & zone	max support steel spacing	min support steel thickness	min support steel yield stress
KS110CTF	1.6 to 7.9 in. (40 to 200 mm)	43.3 in. (1.1 m)	no height restriction	Class S (severe)	Class +35/-49 Zone H	78 ¾ in. (2 m)	0.079 in. (2.0 mm)	70 ksi (450 MPa)

KS110CTF wall panels with minimum 0.079 in. (2.0 mm) thick and minimum 70 ksi (450 MPa) yield stress, spaced maximum 78 ¾ in. (2 m) on center. KS110CTF wall panels, with minimum 0.016 in. (0.40 mm) thick internal and 0.016 in. (0.4 mm) external steel facer with a 1.6-7.9 in. (40-200 mm) thick IPN core foam system and through-fastened every panel joint / girt interface (78 ¾ in. (2 m) on center) with three Ejot JT2-D6H-5.5/6.3 or three SFS SDT5-A16-5.5 fasteners. Panel side joints consist of overlapping internal and external profiles. Facer profiles are Megalambri, Microrib, and Smooth. Available coatings are 20 micron thick polyester and 100 micron thick plastisol.

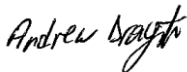
- 9.2 See [www.ApprovalGuide.com](http://www.ApprovalGuide.com) for the Approved assemblies.
- 9.3 Test results show 1) the panels in and of themselves would not create a need for automatic sprinklers and 2) the panels would be acceptable in a combustible occupancy protected by automatic sprinklers as defined by FM Global Property Loss Prevention Standards.
- 9.4 Approval is effective as of the date of this report since a duly signed Master Agreement is on file for this customer.
- 9.5 Continued Approval will depend upon satisfactory field experience and periodic Surveillance Audits.

**TESTING SUPERVISED BY:** Andrew Dragoti

**PROJECT DATA RECORD (PDR):** Project ID 3047576

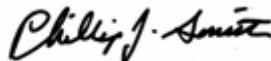
**ORIGINAL TEST DATA:** Project ID 3043355, 3026353, 3034123

**REPORT BY:** **REPORT REVIEWED BY:**




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**Andrew Dragoti**  
Associate Engineer - Materials Section




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**P. J. Smith, PE**  
AVP, Technical Team Manager