



Certificate of Compliance

This certificate is issued for the following:

KS110CTF Camlock Cold Store Panel
Insulated Wall or Wall and Roof/Ceiling Panels for Interior and/or Exterior Use

Prepared for:

Izopoli Yapi Elemanlari Taahhut San ve Tic AS
Adana Yumurtalik Serbest Bolgesi
Ceyhan/Adana
Turkey

FM Approvals Class: 4881

Approval Identification: 0003050317

Approval Granted: 9/24/2014

To verify the availability of the Approved product, please refer to www.approvalguide.com or www.roofnav.com

Said Approval is subject to satisfactory field performance, continuing Surveillance 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'.

Cynthia Frank
AVP - Manager, Materials
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062



Member of the FM Global Group



Member of the FM Global Group

Not to be distributed outside of FM Approvals and its affiliates except by Customer

APPROVAL REPORT

Project No: 3050317
Supplements Project No.: 3036213, 3013471, 3047576
Class: 4881
Product Name: KS110CTF Camlock Cold Store Panel
Product Type: Insulated Wall or Wall and Roof/Ceiling Panels for Interior and/or Exterior Use
Name of Listing Company: Izopoli Yapi Elemanlari Taah. San. ve Tic. A.S.
Address of Listing Company: Adana Yumurtalik Serbest Bolgesi
Ceyhan/Adana
Turkey
Customer ID: 1000009658-1
Customer website: <http://www.izopoli.com>

Prepared by

Kalyn Magazu
Engineer

Reviewed by

Leonard D'Angelo
Technical Team Manager, Materials

Cynthia E. Frank
AVP, Manager, Materials

9/24/2014

Date of Approval

1 INTRODUCTION

1.1 Izopoli Yapi Elemanlari Taah. San. ve Tic. A.S. requested Approval of their KS110CTF Camlock Cold Store Panel listed in Section 1.4 to determine if it meets the Approval requirements of the standard(s) listed in Section 1.3.

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

1.3 Standards

Title	Number	Issue Date
Approval Standard for Class 1 Fire Rating of Insulated Wall or Wall and Roof/Ceiling Panels, Interior Finish Materials or Coatings, and Exterior Wall Systems	4880	May, 2010
Approval Standard for Class 1 Exterior Wall Systems	4881	November, 2007

1.4 Listing

The product will appear in the Approval Guide, an on-line resource of FM Approvals, as follows:

- 1.4.1 Building Insulations - Walls and Ceilings (FM Approval Class Numbers 4411, 4651, 4880, 4881, 4882) Wall-Ceiling Construction/Roof Construction (Class Number 4880) Wall-Ceiling Construction Metal-faced with Combustible Core

Product	Primary Class of Work	Listing Country	Height Restriction	Certification Type
KS110CTF Camlock Cold Store Panel	4880-Wall/Ceiling Ins. Assembly	Turkey	No Height Restriction	FM Approved

KS110CTF Camlock Cold Store Panel wall and ceiling panels consist of minimum 0.016 in (0.40 mm) thick interior and exterior coated (optional) galvanized steel or stainless steel facers with a 1.6-7.9 in. (40-200 mm) thick IPN core foam system. Panels are 43.3 in (1100 mm) wide.

Assembly of interior corners are finished with 76 mm (3.0 in) by 76 mm (3.0 in) by 0.6 mm (0.02 in) steel angle flashing fastened 300 mm (11.8 in) on center.

- 1.4.2 Building Insulations - Walls and Ceilings (FM Approval Class Numbers 4411, 4651, 4880, 4881, 4882) Exterior Wall Constructions (Class Number 4881)

Product	Primary Class of Work	Listing Country	Height Restriction	Certification Type
KS110CTF Camlock Cold Store Panel	4881-Exterior Wall Systems	Turkey	No Height Restriction	FM Approved

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 Camlock Cold Store Panel	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 Camlock Cold Store Panels; minimum 0.016 in. (0.40 mm) thick internal and 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.

2 DESCRIPTION

- 2.1 The KS110CTF Camlock Cold Store Panel wall and ceiling panels are 1.6-7.9 in (40-200 mm) thick by 43.3 in (1100 mm) wide with minimum 0.016 in (0.40 mm) interior and exterior galvanized steel or stainless steel facers. Facer coatings are (optional) 20 micron thick polyester, 25 micron thick pvdf, or 100 micron thick plastisol. Facer profiles are (sub name follows profile) megalambri (MEGACOLD), microrib (MICROCOLD), and smooth (PHRMACOLD)
- 2.2 The double tongue and groove joint of the KS110CTF Camlock Cold Store panels utilizes a Camlock
- 2.3 Assembly of interior corners are finished with 76 mm (3.0 in) by 76 mm (3.0 in) by 0.6 mm (0.02 in) steel angle flashing fastened 300 mm (11.8 in) on center.
- 2.4 Panels are 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.

3 EXAMINATIONS AND TESTS

- 3.1 Samples were submitted for examination and testing. The samples were considered to be representative of standard production and were examined or tested as indicated below. All data is on file at FM Approvals along with other documents and correspondence applicable to this program.
- 3.2 All testing and analysis considered appropriate was conducted and verified to be in compliance with the Standards defined in Section 1.3.
- 3.3 Several performance requirements and tests required by the Standard have been waived due to previous successful testing. See Table 1 below for details.

Table 1

Standard Number	Section	Test Name	Justification/Comments
4880	4.1	Flammability Characterization	Conducted under PI 3036213
4880	4.2	FM Approvals 25 ft (7.6 m) High Corner Test	Exception 2 - test waived with 16 ft high parallel panel fire test. 16 ft high parallel panel fire test successfully completed
4880	4.3	FM Approvals 50 ft (15.2 m) High Corner Test	Exception 4 – Test waived with 16 ft high parallel panel fire test. 16 ft high parallel panel fire test successfully completed
4880	4.4	Room Test	Successfully completed
4880	4.5	Surface Burning Characteristics of Plastic Foam Insulating Cores	Conducted under PI 3013471
4880	4.6	Density of Panel Insulating Cores	
4880	4.7	Density of Plastic Panels or Panel Facings	Not applicable to steel facer panels
4880	4.8	Ignition Properties of Plastic Panels or Panel Components	Conduct under PI 3013471
4880	4.9	Heat Content of Plastic Panels or Panel Components	
4880	4.10	Ash Content of Plastic Panels or Panel Components	
4881	4.1	Class 1 Fire Rating	Conducted FM Standard Class 4880 listed above
4881	4.2	Simulated Wind Load Rating	Evaluated under 3047576
4881	4.3	Windborne Debris Ratings	Not applicable for Zone H
4881	4.4	Hail Resistance Rating	Evaluated under 3047576

4 MARKING

- 4.1** The manufacturer shall mark each panel or packing container with the manufacturer's name and product trade name. In addition, the panel or container must be marked with the Approval Mark of FM Approvals.
- 4.2** The manufacturer shall mark the packaging for exterior wall systems with the manufacturer's name, product trade name and the Approval mark of FM Approvals.

- 4.3** The manufacturer shall mark each component of an FM Approved exterior wall system consisting of a long section with the Approval mark of FM Approvals, where practicable. Such markings may be located on the backside of the component such that the markings cannot be seen after the component has been installed.
- 4.4** Upon completion of an installation, the manufacturer shall attach permanent, corrosion resistant nameplates to the exterior of the building. The nameplates shall be visible from ground level. At a minimum, the nameplates shall bear the manufacturer's name, product trade name, date of construction, the Approval mark of FM Approvals and the applicable Approval ratings for fire, wind and hail.
- 4.5** With the exception of the nameplates installed on the exterior of the building after the completion of an installation, labels or markings denoting Approval shall be applied by the manufacturer only within and on the premises of manufacturing locations that are under the FM Approvals Surveillance Audit Program.
- 4.6** The manufacturer agrees that use of the FM Approvals name or Approval Mark is subject to the conditions and limitations of the Approval by FM Approvals. Such conditions and limitations must be included in all references to Approval by FM Approvals.

5 REMARKS

- 5.1** Continued Approval is based upon fabrication and construction of the KS110CTF Camlock Cold Store Panel in accordance with this Approval Report, satisfactory field experience and continued use of acceptable quality control procedures as determined by Surveillance Audits.
- 5.2** The combustible core system described in section 2.2 has not been evaluated for the toxicity of the products of combustion.
- 5.3** The wind and hail ratings established in Section 1.4 of this report are to be used in conjunction with FM Global Property Loss Prevention Data Sheets 1-28 Design Wind Loads, 1-34 Hail Damage and 1-57 Plastics in Construction.

6 SURVEILLANCE AUDIT

The manufacturing facilities at the following location(s) shall be visited on a routine basis. The facility processes and quality control procedures in place have been determined to be satisfactory to manufacture products identical to that tested and Approved. A Form 797 shall be submitted to FM Approvals for requesting to manufacture products at any additional or alternate manufacturing facilities which are not listed below.

Audit Location(s)

Adana Yumurtalik Serbest Bolgesi
Ceyhan/Adana
Turkey

7 MANUFACTURER'S RESPONSIBILITIES

- 7.1 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. No changes of any nature shall be made unless notice of the proposed change has been given and written authorization obtained from FM Approvals.
- 7.2 To ensure compliance with his procedures in the field, the manufacturer shall supply to the installer and owner such necessary instruction or assistance required to produce the desired performance achieved in the tests.
- 7.3 In accordance with the Master Agreement, the manufacturer shall make full and immediate disclosure to FM Approvals of all information concerning any defect in, or potential hazard of, the product or service manufactured or provided by the Customer which is Approved by, or being examined by, FM Approvals. The manufacturer shall make all necessary arrangements for the investigation of complaints / anomalies applicable to this approval and shall keep records of all complaints / anomalies including actions taken.

8 DOCUMENTATION

The following document describes the KS110CTF Camlock Cold Store Panel and is on file at FM Approvals.

Document Title	Issue Date
Surveillance Audit Manual	Sept 22, 2014

9 CONCLUSION

- 9.1 See www.ApprovalGuide.com for the Approved assemblies.
- 9.2 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 combustibility occupancy protected by automatic sprinklers as defined by FM Global Property Loss Prevention Standards.
- 9.3 The steel facings of the panels must be positively secured to the core by 1) attachment of the entire panel assembly to supporting structural members with mechanical fasteners or 2) positive attachment of the interior panel facer to the external panel facer with mechanical fasteners.
- 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.

PROJECT DATA RECORD: 0003050317