

TEST REPORT

REACTION TO FIRE

TEST SPONSOR:

Sistem Metal Yapı Reklam Malzemeleri ve İnşaat San. Tic. A.Ş.

Hatip Mah. Ali Osman Celebi Bulvari

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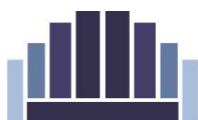
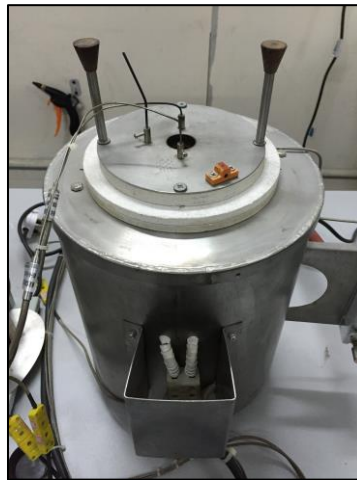
Website: www.albond.com.tr

TESTED MATERIAL/ASSEMBLY:

3mm thick Albond FR Core

TEST STANDARD:

ASTM D 1929-16: Standard Test Method for Determining Ignition Temperature of Plastics



**THOMAS BELL-WRIGHT
INTERNATIONAL CONSULTANTS**

Test Date: 12-Apr-18

Issue Date: 19-Jul-18

Test Reference No: SC137-1 (Rev.01)

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ABU DHABI

DOHA



Accreditation

ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories with:

United Kingdom Accreditation Service (UKAS) - Testing Laboratory: **4439**
www.ukas.com



Memberships

Members of European Group of Organization for Fire Testing, Inspection and Certification

www.egolf.org.uk

Member of International Trade Council

www.thetradecouncil.com

Member of Association for Specialist Fire Protection

www.asfp.org.uk

Member of Centre for Window and Cladding Technology

www.cwct.co.uk



The work which is the subject of this report falls wholly or partly under the accreditations of **ISO 17025** **UKAS**.



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1. INTRODUCTION

Determination of the flash ignition temperature and spontaneous ignition temperature of Albond FR Core using hot-air ignition furnace as per ASTM D 1929-16; Standard Test Method for Determining Ignition Temperature of Plastics.

2. SPONSOR

Name: Sistem Metal Yapı Reklam Malzemeleri ve İnşaat San. Tic. A.Ş.
Address: Hatip Mah. Ali Osman Celebi Bulvari
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3. TESTING LABORATORY

Name: Thomas Bell-Wright International Consultants (TBWIC)
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Dubai, United Arab Emirates
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F: +971 4 333 2693
Website: www.bell-wright.com

4. DATE OF TEST

Sample received: 20-Mar-18
Test date: 12-Apr-18



5. SPECIMEN DESCRIPTION

The description of the specimen given below has been prepared from information provided by the Sponsor.

Product Tested	3mm thick "Albond FR Core"
Manufacturer	Note 1
Colour reference	Grey
Thickness	3.0 mm (\pm 0.2 mm)
Density	1.55 g/cm ³
Dimensions of the specimen	2 pieces of 18 x 18 x 3mm Albond FR Core were stacked to achieve the required specimen mass.

Note 1: Information not provided by the client.

The test specimen was sampled by Mr. Suresh Kumar of TBWIC Certification Division dated July 12, 2017 and was submitted by the Sponsor for testing as part of product certification process

6. SPECIMEN PREPARATION PROCEDURE

The specimens were cut into a mass of 3.0 ± 0.2 g, as it is having a density greater than 100 kg/m^3 .

7. METHOD OF TEST

7.1. Test Procedure

The prepared 3mm thick Albond FR Core was tested using hot air ignition furnace as prescribed in ASTM D1929-16. The electrically heated furnace is adjusted until the air temperature remains constant at the desired initial test temperature at a set air velocity of 25 mm/s, the test specimen is lowered to the approximate center of the tube furnace with a specimen holder while ensuring that thermocouples TC1 and TC2 are in their position. A cover is then placed over the top of the furnace, which contains a 25mm diameter hole in the center, through which excess furnace air and any gases given off by the specimen escapes.

Pilot flame is placed over the hole on the cover to ignite the gases, if an ignitable concentration occurs. Thermocouples TC1 measures the temperature, T1, of the specimen. Thermocouple (TC1) is located as close as possible to the center of the upper surface of the specimen when the specimen is in place within the furnace.

Thermocouple (TC2) gives some indication of the temperature, T2, of the air traveling past the specimen and is located 10 ± 2 mm below the center of the specimen pan.

Flash Ignition Temperature (FIT) and Spontaneous Ignition Temperature (SIT) is then determined.

7.2. Conditioning

After delivery on 20-Mar-18, the specimen was stored in room temperature for a minimum of 40 hours prior to the test ranging from 21 to 25°C and 45 to 55% relative humidity.



8. TEST OBSERVATIONS

Observations	Results
1. Flash Ignition:	
Specimen weight, g	3.07
Specimen dimensions, mm	2 layers of 18 x 18mm
Air flow rate, Q_v	2.80
Temperature, T_3 , °C	453
Flash Ignition at nozzle, min:sec	5:50
Flaming combustion of the specimen, min:sec	5:52
Glowing combustion of the specimen, min:sec	Not observed
Explosion, min:sec	Not observed
Lowest Air Temperature, T_2, at which flash observed, °C	420
<i>Smoking</i>	Yes
<i>Excessive Foaming</i>	Not observed
<i>Melting</i>	Not observed
<i>Bubbling</i>	Not observed
2. Spontaneous Ignition:	
Specimen weight, g	2.80
Specimen dimensions, mm	2 layers of 18 x 18mm
Air flow rate, Q_v	2.80
Temperature, T_3 , °C	453
Flaming combustion of the specimen, min:sec	6:28
Glowing combustion of the specimen, min:sec	Not observed
Lowest Air Temperature, T_2, at which the specimen burns, °C	420
<i>Formation of Soot or Smoking</i>	Yes
<i>Excessive Foaming</i>	Not observed
<i>Melting</i>	Not observed
<i>Bubbling</i>	Not observed



9. SUMMARY OF RESULTS

The test specimen has been evaluated in accordance with ASTM D 1929-16: Standard Test Method for Determining Ignition Temperature of Plastics.

The test results are:

Flash Ignition Temperature (FIT), °C	420
Spontaneous Ignition Temperature (SIT), °C	420

Test results relate only to the specimen tested and there is no pass or fail criteria for ASTM D1929-16 standard.

10. LIMITATION

“These test results relate only to the behavior of test specimens under the particular conditions of the test. They are not intended to be used, and shall not be used, to assess the potential fire hazards of a material in use.”



11. RECOMMENDATION

Thomas Bell-Wright International Consultants recommend that the relevance of test reports should be considered after a period of five years.

This test report is respectfully submitted by: Thomas Bell-Wright International Consultants

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Laboratory Operations Manager
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Revision 01: The following change was made in the second page of the initial report:

- Removed ISO 17025 GAC logo.



12. APPENDIX 1- PICTURES

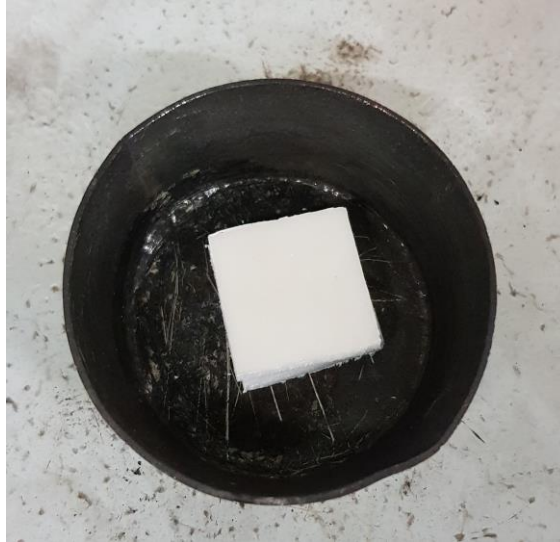


Photo 1: Specimen before the test



Photo 2: Specimen after the test

--- End of Test Report ---