

בשורה לעולם הבנייה הירוקה, שעם טבעי בהתזה לחיפויים חיצוניים





- **v** 04-8764444
- 04-8767728
- 🔹 יוסף לוי 19, א.ת ק.ביאליק
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תאור המוצר

ישראלאק מביאה בשורה בתחום הבנייה הירוקה למבנים פרטיים ומוסדיים-פתרון יעיל וידידותי למשתמש ולסביבה. ציפוי דקורטיבי על בסיס שעם טבעי ליישום בהתזה, נוסחה מיוחדת להפחתת מעבר חום/קור לאזור המטופל, שבירת הגשר התרמי ויצירת חיסכון בצריכת האנרגיה. תכונותיו הטבעיות מקנות לו יכולות איטום ועמידות גבוהה בתנאי אקלים קשים לאורך הזמן. ניתן ליישום על גבי תשתיות שונות כגון טיח, בטון, גבס, מלט, לבנים, מתכת וכו'

אז למה בעצם שעם? שעם הוא אחד המבודדים התרמיים הטבעיים הטובים ביותר שקיימים, לשעם עמידות בפני מעבר חום גבוהה פי 30 מבטון.

יתרונות המוצר

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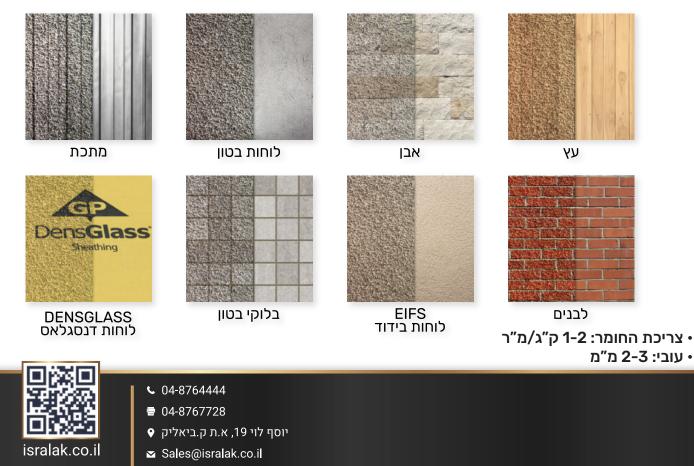
- 100% ניתן למיחזור
- ניתן לגוון לפי דרישה
- הציפוי מעניק ממברנת איטום תרמית המעניקה הבדל בין Cי20°C
 - . • ציפוי הידרופובי המונע חדירת מים
 - חומר נושם המונע עיבוי
 - עמידות באש לפי:
 - Class Bs2, D0 תקן ארופאי:
 - ASTM E84:Class A -תקן אמריקאי:



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Indoor applications:

אפשרויות ליישום

העובדה שהציפוי ניתן ליישום על מגוון כ״כ רחב של תשתיות מקנה לו יכולת לתת פתרונות במגוון פרוייקטים:





Application on roofs

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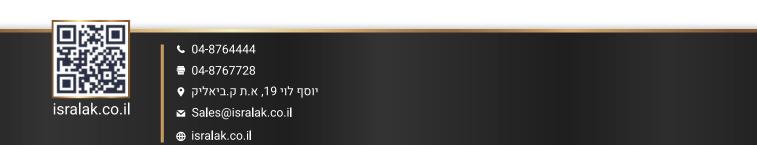


גוונים

<u>מרקם עדין:</u>

ניתן לקבל את הציפוי במגוון רחב של גוונים, במרקם עדין או בינוני







תעודות, בדיקות ואישורים



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LGAI Technological Center S.A. Campus UAB Ronda de la Font del Carme s/n E-08193 Bellaterra (Barcelona) T +34 93 567 20 00 www.appluslaboratories.com



Bellaterra	:	17th November 2021
Dossier number	:	18/17705-2210M2
Petitioner Reference	:	FERRO COVERLINK, S.L. Avda. Real de Extremadura, 25 12200 Onda (Castellón)

TEST REPORT

RECEIVED MATERIAL

On July 16th 2018 several specimens applied with coating product for the concrete has been received in Applus Labortories, with the following references as specified by the applicant:

SPRAY CORK BY COVERLINK

REQUESTED TESTS:

PRODUCTS AND SYSTEMS FOR THE PROTECTION AND REPAIR OF CONCRETE STRUCTURES; Surface protection systems for concrete, EN 1504-2:2005. Table 1 and 5: Performance characteristics and requirements for products and systems for surface protection.

- 1- Measurament of bond strength by pull-off, UNE-EN 1542:1999
- 2- Determination of water-vapour transmission properties, UNE-EN ISO 7783:2012
- 3- Determination of liquid-water transmission rate (permeability), UNE-EN 1062-3:2008
- **TEST DATE:** From 16/07/2018 to 03/08/2018

RESULTS : See attached pages.

Responsible for Construction MaterialsTechnician ResponsibleLGAI Technological Center S.A.LGAI Technological Center S.A.The results included in this document refer exclusively to the indicated materials and has been testedaccording to the specifications given. This report replaces and cancels the report or certificate 18 /17705-2210M1, dated June 30, 2021. The modification consists in changing the reference name of thetested product.

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Page 1- This document is **4** pages long, whereof **0** are appendixes



Dossier number 18/17705-2210M2

Page 2

FERRO COVERLINK, S.L.

RESULTS:

1- Measurament of bond strength by pull-off, UNE-EN 1542:1999

The reference samples, are $300 \times 300 \times 100$ mm sheets, manufactured from aggregates with a maximum size between 8 and 12mm and the surface of which has been pre-treated by gritblasted, with a concrete reference MC(0,40) according to test standard UNE-EN 1766:2000.

NO bubbles, cracks or flaking after the cure is completed have been detected.

Specimen n ^o	Tensile strength (N/mm²)
1	0,85 (B)
2	0,95 (B)
3	0,88 (B)
4	1,02 (B)
5	1,13 (B)
Mean	1,0 MPa

NOTE: failure type in brackets.

A: Concrete cohesive failure

A/B: Adhesive failure between concrete and 1st layer applied

B: Cohesion failure between layers

Requirements according to EN 1504-2:2004 Table 5			
Flexible Sys	tems	Rigid Sy	ystems
Without trafficking	With trafficking	Without traffcking	With trafficking
≥ 0,8 MPa	≥ 1,5 MPa	≥ 1,0 MPa	≥ 2,0 MPa



Dossier number

18/17705-2210M2

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FERRO COVERLINK, S.L.

SPRAY CORK BY COVERLINK

2- Determination of water-vapour transmission properties, UNE-EN ISO 7783:2012

- Three cylindrical test specimens have been prepared, approximate surface= $0,0095 \text{ m}^2$ (100 mm diameter), to test with support or substrate.

- After curing for 28 days in laboratory conditions, the test specimens undergo 3 cycles of immersion in water and drying.

- Site ambient conditions: 23°C and 50% R.H.

- Saturated dissolving in capsules: dihydrogen ammonium phosphate (93%RH).

- Pressure difference (Δp)= 1210 Pa.

To create an atmosphere of 93% R.H. inside the capsule, a saturated dissolving with dihydrogen ammonium phosphate is used, whereby a 50% humidity shall be attained outside the capsule and 93% inside, thereby reducing the mass of the sample-capsule set.

Specimen n ^o	Water-vapour flow rate G (g/h)	Water-vapour transmission rate V (g/m ² * day)	Diffusion- Equivalent air layer thickness Sd (m)	Water vapour resistance factor µ
1	0,0121	30,6	0,7	349
2	0,0085	21,4	1,0	522
3	0,0110	27,8	0,7	378
Mean	0,0105	26,6	0,8	416
Requirements according to UNE-EN 1504-2:2004 Table 5				
Class I (permeable to water vapour)		er vapour)	Sd < 5 m	
Class II			5m ≤ Sd ≤ 50 m	
Class III (dense against water vapour)		Sd > 50 m		



Dossier number 18/17705-2210M2

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FERRO COVERLINK, S.L.

SPRAY CORK BY COVERLINK

3- Determination of liquid-water transmission rate (permeability), UNE-EN 1062-3:2008

Ceramic specimens have been used as the substrate: approximate size 150x150mm, 30 mm thick, density 1650 kg/m³ and liquid water transmission index 7,5 Kg/($m^2 \cdot h^{0,5}$).

After curing the product for 28 days in laboratory conditions, the test specimens undergo 3 water immersion and drying cycles, and a final drying.

	Specimen n ^o		W (Kg/m ² h ^{0,5})	
	1		0,06	
	2		0,08	
	3		0,09	
	Mean		0,08	
Req	ueriments according to	DUNE-E	N 1504-2:2004 Table	e 5
ary absorption and permeability to water $W < 0.1 \text{ Kg/(m}^2 * h^2)$		n ² * h ^{0,5}		

Service Quality Assurance

Capilla

Applus+, guarantees that this work has been made in accordance with our Quality and Sustainability System, fulfilling the contractual conditions and legal norms.

Within our improvement program we would be grateful if you would send us any commentary that you consider opportune, to the person in charge who signs this document, or to the Quality Manager of Applus+, in the following e-mail address: satisfaccion.cliente@applus.com



ASTM E84 Standard

TEST REPORT

Rendered to:

Ferro Coverlink S.L.

PRODUCT:

Aerosol Cork Spray

Report No.: Test Date(s): Report Date: FCS071621-49 08-06-2021 08-09-2021 12 pages

6151 Mumford Rd., Bryan, TX 77807 Phone: 574-773-7975 www.icc-nta.org



Test Report

FCS071621-49 08-09-2021

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TEST REPORT

Rendered to:

Ferro Coverlink S.L. Avda. Real de Extremadura 25 Onda, Castellon 12100

Report No.:	FCS071621-49
Test Date:	08-06-2021
Report Date:	08-09-2021

1.0 General Information

1.1 Product

Aerosol Cork Spray

1.2 Project Summary

ICC NTA, LLC was contracted by Ferro Coverlink S.L. to evaluate Aerosol Cork Spray in accordance with ASTM E84-21a. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at ICC NTA's facility in Bryan, TX.

1.3 Product Description

Product Name:	Aerosol Cork Spray
Product type:	Cork Spray
Product Use:	Interior
Model Name/Sample	1
Number:	
Sample Description:	Aerosol Cork Spray (6) 24 x 48-in.
Color:	Blue
Sample Length:	24-ft
Sample Width:	24-in.
Thickness:	1/2-in.
Total Weight:	86.6 lbs
Sample Received Date:	07-30-2021
Days in Conditioning:	7



1.4 Qualifications

ICC NTA in Bryan, TX has demonstrated compliance with ISO/IEC 17025 and is consequently accredited as a Testing Laboratory. ICC NTA is accredited to perform all testing reported herein.

1.5 Product Sampling

No evidence was provided that a third-party agency sampled materials for the testing reported herein. All test specimens were supplied by Ferro Coverlink S.L.

1.6 Witnessing

No representatives of Ferro Coverlink S.L. were present for testing reported herein.

1.7 Conditioning of Test Specimens

Unless otherwise indicated, all testing reported herein was conducted in a laboratory set to maintain temperature in the range of 65-80°F and humidity in the range of 45-60% RH. All test specimen materials were stored in the laboratory conditioning room of 73.4 \pm 5°F and at a relative humidity of 50 \pm 5% environment for no less than 24 hours prior to testing. The test specimens were conditioned for **7** days and obtained steady state.



2.0 Referenced Standards

ASTM E84-21a Standard Test Method for Surface Burning Characteristics of Building Materials.

3.0 Summary of Results

Flame Spread Index – 5

Smoke Developed Index –25

4.0 Test Results

TEST DATA	
Time to Ignition (mm:ss):	01:52
Maximum Flame Spread (ft):	1.000
Time to Max Flame Spread (mm:ss):	02:14
Maximum Temperature (°F):	543
Time to Max Temperature (mm:ss):	09:28
Total Fuel Burned (cubic feet):	40.360
Flame Spread*Time Area (ft*min):	7.770
Smoke Area (%A*min):	25.080
Unrounded FSI:	4.002
Unrounded SDI:	23.422

TEST OBSERVATIONS

01:09	Observed Discoloration
01:52	Sample Ignition
03:03	Observed Falling Debris
05:06	Observed Falling Debris
08:04	Observed No Changes

POST-TEST OBSERVATIONS

0 – 8 ft	Section was consumed with charred layers
	on floor.
8 – 16 ft	Section was charred on leading edge and
	stayed attached to substrate.
16 – 24 ft	Section on surface was discolored and
	stayed attached to substrate.



Analysis on Classification Criteria

Based on Flame Spread Index and Smoke Developed Index when tested in accordance with ASTM E84 or UL 723. Three classes of interior finish are specified by the International Building Code (IBC) that describes a set of classification criteria required for interior wall and ceiling finish materials. The classification criteria for all three model codes is the same: ASTM E84 and UL 723 do not include classification criteria for the results obtained from testing.

Class	Flame Spread Index	Smoke Developed Index
А	0-25	0-450
В	26-75	0-450
С	76-200	0-450

4.1 General

This fire-test–response standard for the comparative surface burning behavior of building materials is applicable to exposed surfaces such as walls and ceilings. This standard is used to measure and describe the response of materials, products, or assemblies to heat and flame under controlled conditions, but does not by itself incorporate all factors required for fire-hazard or fire-risk assessment of the materials, products, or assemblies under actual fire conditions.

4.2 Test Specimens

The samples submitted by the manufacturer were (6) 24 x 48-in. sheetrock panels with aerosol cork spray applied onto sheetrock. They were received without damage. They were individually weighed and logged into the test samples database and placed in the NTA temperature and humidity controlled conditioning room.

4.3 Test Setup and Procedure

The product(s) were setup and evaluated in accordance with ASTM E84-21a.

Substrate Used:	Sheetrock
Mounting Method:	Standard
Support Used:	None
Side Exposed:	Cork Spray
Adhesive Used & Coverage	N/A
Rate (if Applicable):	
Cement Board Used to Cover Sample (Y/N):	Yes
Sample Continuous or Sectioned:	Sectioned
No. & Size of Sections:	(6) 24 x 48-in.
Lab Ambient Temp (°F):	74
Lab Ambient RH (%):	56
Date Tested:	08-06-2021



5.0 **Closing Statement**

This report contains only findings and results arrived at after employing the specific test procedures listed herein. It does not constitute a recommendation for, endorsement of, or certification of the product or material tested. Unless differently required, ICC NTA, LLC reports apply the "Simple Acceptance" rule, also called "Shared Risk approach", of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity. ICC NTA makes no warranty, expressed or implied, except that the test has been performed, and a report prepared, based upon the specimen specified by the client. Extrapolation of data, from the test data provided herein, to the batch or lot from which the specimens were obtained may not correlate and should be interpreted with extreme caution. ICC NTA assumes no responsibility for variations in quality, composition, appearance, performance, or other features of similar materials produced by the client, other persons, or under conditions over which ICC NTA has no control. ICC NTA has issued this report for the exclusive use of the client to whom it is addressed. Any use or duplication of this report shall not be made without their consent. This report shall only be reproduced in its entirety.

For ICC NTA, LLC:

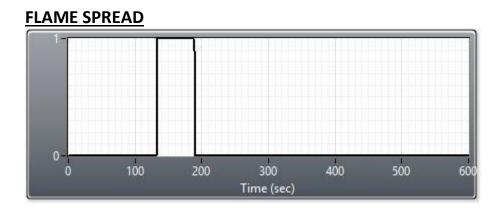
Gabriel Parra Tested by: Gabriel Parra 08-09-2021 Test Engineer/Technician

Troy Bronstad Reviewed by: Troy Bronstad Senior Technical Team Leader

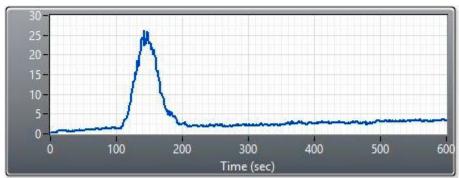
08-09-2021



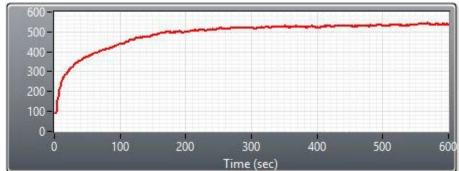
Appendix A - Data



<u>SMOKE (%A)</u>



TEMPERATURE





Appendix B – Photographs



Photo No. 1 Sample ID



Photo No. 2 Pre-Test Exposed Side





Photo No. 3 Pre-Test Unexposed Side in Tunnel



Photo No. 4 Post-Test Unexposed Side in Tunnel



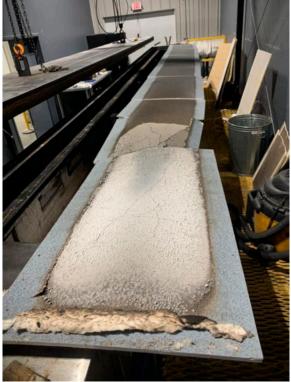


Photo No. 5 Post-Test Exposed Side



Photo No. 6 Post-Test Exposed Side Section 2



Appendix C - Revision Log

Rev. # Date Page(s)

Revision(s)

0 08-09-2021 N/A

Original report issue



Reference: 2103209-01 Order sheet: 22101186

TEST REPORT n. 221.I.2103.407.EN.01

AT THE REQUEST OF:

COMPANY:	FERRO-COVERLLINK, S.A.
PERSON IN CHARGE:	ANA BELÉN ALBIOL
ADDRESS:	AV. REAL DE EXTREMADURA, 25
TOWN:	12200 ONDA (CASTELLÓN) SPAIN
PHONE NUMBER:	+34 964604000

VAT NUMBER: B-12405577

CONCERNING:

SAMPLE:	PROJECTED INSULATION	CORK	FOR	THERMAL
TEST:	THERMAL CON		Υ	

SAMPLES RECEPTION DATE:	22/03/2021
TESTING STARTING DATE:	22/03/2021
TESTING FINISHING DATE:	29/03/2021

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THIS REPORT CONSISTS OF 3 CONSECUTIVELY NUMBERED PAGES.

The test samples, the subject of this report, will remain at AIDIMME for a period of three months starting from the report issue date. That period having expired, it will be destroyed. Hence, any claim must be made within this time limit.

AIDIMME. METAL-PROCESSING, FURNITURE, WOOD AND PACKAGING TECHNOLOGY INSTITUTE

Test report n. 221.I.2103.407.EN.01

1. DESCRIPTION AND IDENTIFICATION OF THE SAMPLE. INSPECTION BEFORE TESTING

Sample of projected cork for thermal insulation, identified by the customer as **"ISOLATE TECH**", based on styrene-acrylic resins in aqueous emulsion, natural cork and other additives, according to information provided by the client, whose approximate dimensions are 300 mm × 300 mm × 50 mm.

The sample is referenced in AIDIMME as 2103209-01.

2. ORIGIN OF THE SAMPLES

Sample supplied by the client.

3. TESTS REQUESTED

Determination of thermal conductivity according to ASTM C518.

4. STANDARD TEST METHOD

Test method is carried out according to the procedure described in the standard ASTM C518 - 17 "*Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus*".

5. DESCRIPTION OF THE TEST METHOD

DETERMINATION OF THERMAL CONDUCTIVITY

The sample is conditioned to constant mass at a temperature of (23 ± 2) °C and a relative humidity of (50 ± 5) % prior the thermal conductivity measurement test is carried out with a NETZSCH HFM 436/3 equipment.

The specimen is placed between a hot and a cold plate, and the heat flow created by the well-defined temperature difference is measured with a heat flux sensor.

The instrument is calibrated with a National Institute of Standards & Technology (NIST) certified reference standard of known thermal conductivity (standard 1450c), establishing the precise correlation between the signal output of the transducers and the actual heat flow. Thermal conductivity is calculated once the equilibrium criteria are met.

6. TEST RESULTS

DETERMINATION OF THERMAL CONDUCTIVITY

METHOD	AVERAGE TEMPERATURE (°C)	THERMAL CONDUCTIVITY (W/m·K)	THERMAL RESISTANCE (W/m ² ·K)
	10	0,043	1,198
ASTM C518-17	20	0,043	1,195
ASTM C518-17	30	0,044	1,169
	40	0,046	1,124

Thickness of the specimen: 51,5 mm Density of the conditioned specimen: 218,7 kg/m 3

Measurement conditions for thermal conductivity:

- Measuring temperatures: 10 °C, 20 °C, 30 °C and 40 °C
- Average temperature difference between hot and cold plate: 20 °C
- Environmental conditions: 23 °C and 60% RH.

The results of the tests apply only to the tested samples.

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Date: March, 29th 2021



Rosa M^a Pérez Campos, PhD Head of Materials Laboratory AIDIMME

MEO

José Luis Millá Technician of Materials Laboratory AIDIMME



Reference: 2111043-01 and 02 Order sheet: 22105266

TEST REPORT n. 221.I.2112.1292.EN.01

AT THE REQUEST OF:

COMPANY:	FERRO-COVERLLINK, S.A.
PERSON IN CHARGE:	ANA BELÉN ALBIOL
ADDRESS:	AV. REAL DE EXTREMADURA, 25
TOWN:	12200 ONDA (CASTELLÓN) SPAIN
PHONE NUMBER:	+34 964604000

VAT NUMBER: B-12405577

CONCERNING:

SAMPLE:	PROJECTED	CORK	FOR	THERMAL
TEST:	FREEZE/THAW	/ RESISTA	NCE	

SAMPLES RECEPTION DATE:	04/11/2021
TESTING STARTING DATE:	04/11/2021
TESTING FINISHING DATE:	20/12/2021

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Test report n. 221.I.2112.1292.EN.01

1. DESCRIPTION AND IDENTIFICATION OF THE SAMPLE. INSPECTION BEFORE TESTING

Samples of two different projected cork coatings for thermal insulation, identified by the customer as "SPRAY CORK FINE BY COVERLINK" and "SPRAY CORK TECH BY COVERLINK", based on styrene-acrylic resins in aqueous emulsion, natural cork and other additives, applied on PVC substrate whose approximate dimensions are 150 mm × 150 mm × 5 mm, according to information provided by the client. The samples are referenced in AIDIMME as 2111043-01 and 2111043-02 respectively.

2. ORIGIN OF THE SAMPLES

Samples supplied by the client.

3. TESTS REQUESTED

Determination of freeze/thaw resistance according to ASTM E2485.

4. STANDARD TEST METHOD

Test method is carried out according to the procedure described in the standard ASTM E2485/E2485M-13(2018) "*Standard Test Method for Freeze/Thaw Resistance of Exterior Insulation and Finish Systems (EIFS) and Water Resistive Barrier Coatings*" method B (10 cycles).

5. DESCRIPTION OF THE TEST METHOD

DETERMINATION OF FREEZE/THAW RESISTANCE

Five test specimens are subjected to cycles of freezing and thawing consisting of a first stage of air dry at a temperature of 49 °C for a minimum of 8 h, an immersion (finished side down) in a thawing tank, with the water temperature at 24 \pm 5,5 °C, and finally a freezing step at -20°C for 16 h.

After completion, surface changes, viewed at 5x magnification, are examined for signs of deleterious effects, such as cracking, crazing, checking, blistering, peeling, delamination or erosion.

6. TEST RESULTS

SAMPLE REFERENCED IN AIDIMME AS 2111043-01 (SPRAY CORK FINE BY COVERLINK)

TEST	METHOD	RESULTS
Determination of freeze/thaw resistance	ASTM E2485/ E2485M-13(2018)	No deleterious effects at 10 cycles when viewed under 5x magnification

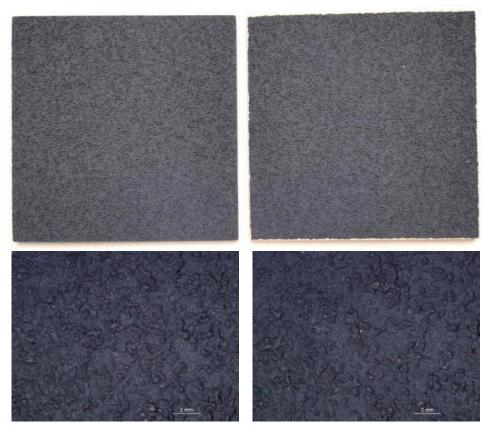


Figure 1. Photographs of a control sample (left) versus the tested sample (right)

TEST	METHOD	RESULTS
Determination of freeze/thaw resistance	ASTM E2485/ E2485M-13(2018)	No deleterious effects at 10 cycles when viewed under 5x magnification





Figure 2. Photographs of a control sample (left) versus the tested sample (right)

The results of the tests apply only to the tested samples.

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Date: December, 20th 2021



Rosa M^a Pérez Campos, PhD Head of Materials Laboratory AIDIMME

NEO

José Luis Millá Technician of Materials Laboratory AIDIMME



Reference: 2108071-01 and 02 Order sheet: 22103885

TEST REPORT n. 221.I.2109.954.EN.03

AT THE REQUEST OF:

COMPANY:	FERRO-COVERLINK, S.A.
PERSON IN CHARGE:	ANA BELÉN ALBIOL
ADDRESS:	AV. REAL DE EXTREMADURA, 25
TOWN:	12200 ONDA (CASTELLÓN) SPAIN
PHONE NUMBER:	+34 964604000

VAT NUMBER: B-12405577

CONCERNING:

SAMPLE:	PROJECTED CORK

TEST:

FLATWISE TENSILE STRENGTH

SAMPLES RECEPTION DATE:	31/08/2021
TESTING STARTING DATE:	06/09/2021
TESTING FINISHING DATE:	14/09/2021

This report cancels and replaces report n° 221.1.2109.954.EN.02

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AIDIMME. METAL-PROCESSING, FURNITURE, WOOD AND PACKAGING TECHNOLOGY INSTITUTE

Test report n. 221.I.2109.954.EN.03

1. DESCRIPTION AND IDENTIFICATION OF THE SAMPLE. INSPECTION BEFORE TESTING

Projected cork for thermal insulation based on styrene-acrylic resins in aqueous emulsion, natural cork and other additives, identified by the customer as **"ISOLATE FINE FR"**, applied on two different substrates.

The sample applied on "*Glasroc X*", a gypsum board with mat reinforcement, was referenced in AIDIMME as 2108071-01. The sample applied on a galvanized sheet metal, was referenced in AIDIMME as 2108071-02.

2. ORIGIN OF THE SAMPLES

Samples supplied by the client.

3. TESTS REQUESTED

Determination of the flatwise tensile strength acccording to ASTM C297 / C297M - 16.

4. STANDARD TEST METHOD

Test method is carried out according to the procedure described in the standard ASTM C297 / C297M - 16 "*Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions*".

5. DESCRIPTION OF THE TEST METHOD

DETERMINATION OF FLATWISE TENSILE STRENGTH

The test consists on measuring the minimum uniaxial tensile force normal to the plane of the sandwich (F_z^{tu}) necessary to detach or rupture the sample. The test is performed by securing 50 mm square loading blocks to the sample with a suitable adhesive. After the adhesive is cured, a universal testing machine is attached to the loading fixture and aligned to apply tension perpendicular to the test surface.

The speed of testing is set to produce failure within 3 to 6 minutes (0,50 mm/min).

The flatwise tensile strength is determined and reported to three significant figures and the type of failure is registered.

Test report n. 221.I.2109.954.EN.03



Fig. 1. Flatwise tensión test setup

According to the standard ASTM E2568 - 17a "*Standard Specification for PB Exterior Insulation and Finish Systems*", the requirement for tensile bond adhesion shall be in conformance with the following table:

Characteristic	Standard	Minimum Properties
Tensile bond adhesion	Test Methods E2134/E2134M or C297/C297M	No failure in the adhesive coat, base coat, or finish coat. The insulation board shall fail cohesively except that 25 % adhesive failure is acceptable. For tested values of 15 psi (0,103 MPa) or greater, adhesive failure up to 100 % is acceptable.

6. TEST RESULTS

DETERMINATION OF FLATWISE TENSILE STRENGTH

SAMPLE REFERENCED IN AIDIMME AS 2108071-01

TEST SPECIMEN	Fz ^{tu} (MPa)	AREA (mm²)	THICKNESS (mm)	WEIGHT (mm ²)	TYPE OF FAILURE
1	0,503	2509	13,93	30,4	Core failure (gypsum board)
2	0,469	2514	13,92	29,8	Core failure (gypsum board)
3	0,390	2510	13,92	30,2	Core failure (gypsum board)
4	0,499	2513	13,90	30,2	Core failure (gypsum board)
5	0,409	2512	13,97	30,4	Core failure (gypsum board)
6	0,481	2509	13,90	30,2	Core failure (gypsum board)
Mean	0,459	2510	13,92	30,2	
Standard deviation	0,048	2	0,03	0,2	
Coefficient of variation (%)	10,405	0	0,19	0,7	

The sample meet the performance required in the standard ASTM E2568-17a



Fig. 2 Example of type of failure after test on reference 2108071-01

TEST SPECIMEN	Fz ^{tu} (MPa)	AREA (mm²)	THICKNESS (mm)	WEIGHT (mm ²)	TYPE OF FAILURE
1	1,466	2454	2,18	48,91	Facing*
2	1,589	2508	2,08	49,97	Facing*
3	1,753	2485	2,08	49,5	Facing*
4	1,540	2471	2,11	49,26	Facing*
5	1,729	2486	2,09	49,56	Facing*
6	1,590	2496	2,10	49,78	Facing*
Mean	1,611	2483	2,10	49,50	
Standard deviation	0,111	19	0,04	0,38	
Coefficient of variation (%)	6,859	1	1,87	0,76	

SAMPLE REFERENCED IN AIDIMME AS 2108071-02

* Cohesive failure of the projected cork

The sample meet the performance required in the standard ASTM E2568-17a



Fig. 3 Example of type of failure after test on reference 2108071-02

The results of the tests apply only to the tested samples.

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Date: September, 17th 2021



Rosa M^a Pérez Campos, PhD Head of Materials Laboratory AIDIMME

EO

José Luis Millá Technician of Materials Laboratory AIDIMME



TEST REPORT for ASTM C297

Rendered to:

Ferro Coverlink S.L

PRODUCT:

Spray Cork by Coverlink

Report No.: Test Date(s): Report Date: FCS071621-51(R0) 09/02/2021 – 09/23/2021 10/29/2021 14 pages

257 E Randolph St Nappanee, IN 46550 Phone: 574-773-7975 www.icc-nta.org



Test Report

FCS071621-51(R0) 10/29/2021

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TEST REPORT

Rendered to:

Ferro Coverlink S.L Avda. Real de Extremadura 25 Onda, Castellon 12200, ESP

Report No.:	FCS071621-51(R0)
Test Date:	09/02/2021 - 09/23/2021
Report Date:	10/29/2021

1.0 General Information

1.1 Product

Spray Cork by Coverlink

1.2 Project Summary

ICC NTA, LLC was contracted by Ferro Coverlink S.L to evaluate *Spray Cork by Coverlink* in accordance with ASTM C297. Results obtained are tested values and were secured by using the designated test method. Testing was conducted at ICC NTA's facility in Nappanee, IN.

1.3 Product Description

Spray Cork by Coverlink was applied to a Densglass substrate. Nominal specimen dimensions were two inches in length and width.

1.4 Qualifications

ICC NTA in Nappanee, IN has demonstrated compliance with ISO/IEC 17025 and is consequently accredited as a Testing Laboratory. ICC NTA is accredited to perform all testing reported herein.

1.5 Product Sampling

No evidence was provided that a third-party agency sampled materials for the testing reported herein. All test specimens were supplied by Ferro Coverlink S.L. Materials arrived in good condition on September 1st, 2021.

1.6 Witnessing

No representatives of Ferro Coverlink S.L were present for testing reported herein.



1.7 Conditions of Testing

Unless otherwise indicated, all testing reported herein was conducted in a laboratory set to maintain temperature in the range of 73.4 ± 3.6 °F and humidity in the range of $50 \pm 5\%$ RH.



2.0 Referenced Standards

ASTM C297-16: Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions

ASTM E2568-09: Standard Specification for PB Exterior Insulation and Finish Systems



3.0 Summary of Results

Standard	Variable	Results
ASTM C297: Tensile Bond	Avg. Flatwise Tensile Strength, T (psi)	72
ASTM E2568	Table 1: Tensile Bond Adhesion	Specimens Met Criteria



4.0 ASTM C297: Tensile Strength

4.1 General

The purpose of this test was to determine the tensile properties of the specimens.

4.2 Test Specimens

Five specimens were tested. Details of the specimens used for testing can be found in Section 1.3.

4.3 Test Setup and Procedure

Prior to testing, each specimen was conditioned to moisture equilibrium and then bonded at ambient lab conditions to a set of fixture blocks for testing purposes. Testing was performed in accordance with ASTM C297. Accordingly, each specimen was loaded in the universal testing machine, as shown in Appendix A, at a rate to obtain ultimate load within 3 to 6 minutes of elapsed testing time. At the conclusion of each test the ultimate load and failure mode were observed and reported.

There were no deviations to the standard.

The ASTM E2568 specification denotes in Table 1 for Tensile bond adhesion that Test Method C297 must be followed. In addition, specimens shall have no failure in the adhesive, base, or finish coats. Test values that achieve a Flatwise Tensile Strength, T, of greater than 15psi can have 100 percent adhesive failure.

4.4 Test Results

Results for testing are summarized in the table below. The formula used in the calculation of results is given in Equation 1. Additional test data and pictures are provided in Appendix A and B.

		$T = \frac{U}{A}$
Whe	ereas:	
Т	=	Tensile Strength (lbf / in. ²)
U	=	Ultimate Load (lbf)
Α	=	Cross-Sectional Area (in. ²)

Specimen	Flatwise Tensile	
Number	Strength, T (psi)	Failure Mode
135491	83	Core Failure of Specimen
135492	76	Core Failure of Specimen
135493	96	Core Failure of Specimen
135494	79	Core Failure of Specimen
125405	25	Core Failure of Specimen. Weak spot on
135495	25	corner caused instantaneous failure.

The testing as conducted met the Tensile Bond Adhesion minimum properties as outlined by Table 1 in ASTM E2568-09.

(Equation 1)



5.0 Closing Statement

This report contains only findings and results arrived at after employing the specific test procedures listed herein. It does not constitute a recommendation for, endorsement of, or certification of the product or material tested. Unless differently required, ICC NTA, LLC reports apply the "Simple Acceptance" rule, also called "Shared Risk approach", of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity. ICC NTA makes no warranty, expressed or implied, except that the test has been performed, and a report prepared, based upon the specimen specified by the client. Extrapolation of data, from the test data provided herein, to the batch or lot from which the specimens were obtained may not correlate and should be interpreted with extreme caution. ICC NTA assumes no responsibility for variations in quality, composition, appearance, performance, or other features of similar materials produced by the client, other persons, or under conditions over which ICC NTA has no control. ICC NTA has issued this report for the exclusive use of the client to whom it is addressed. Any use or duplication of this report shall not be made without their consent. This report shall only be reproduced in its entirety.

For ICC NTA, LLC:

Brian Tedeschi Test Engineer 10/29/2021

Lucas Ward Test Engineer 10/29/2021



Appendix A - Photographs

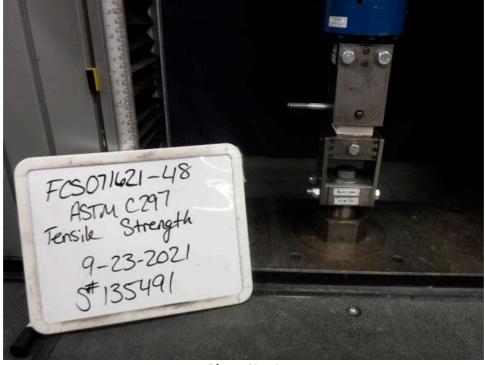


Photo No. 1 ASTM C297 Test Setup, Specimen Number 135491



Photo No. 2 Core Failure Example, Specimen Number 135491



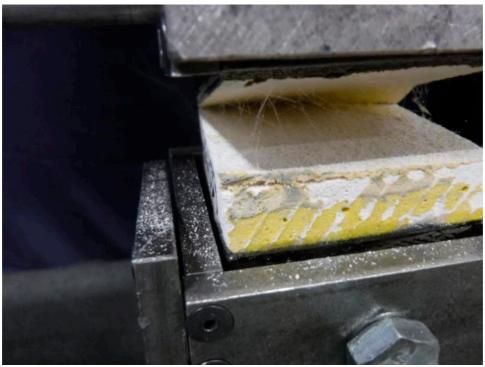


Photo No. 3 Failure Mode Example, Specimen Number 135495



Appendix B – Data

FCS071621-48 ASTM C0297-16 TEST (FINAL) Summary Out Data ICC NTA

SUMMARY DATA ASTM C0297-16

Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions

Client: Ferro Coverlink S.L. Job Number: FCS071621-48 Test Location: ICC NTA Nappanee, Indiana

General:	Apparatus:	Asset No.
Date Received: 9/2/2021	Balance:	02454
Construction Date: 9/15/2021	Measurement Device:	643, 340
Constructed By: Kyle Houdek	Balance:	02454
Performed By: Stephanie Truex	Calipers:	00643
Witnessed By: Brian Tedeschi	Load Cell:	02091
	Loading Frame:	00140
	Balance:	01097

Results Summary:

Average Cross-Sectional Area (in. ²):	3.85	
Average Ultimate Force P max (lbf):	276	
Average Ultimate Flatwise Tensile Strength F _z ^{mu} (psi):	72	

Product Description:

Panel Trade Name: Ferro Coverlink Aerosol Cork Spray Panel Manufacturer: Ferro Coverlink Procedure Modifications: None

This summary contains only data arrived at after employing the specific test procedures listed herein. This summary data might not include all reporting requirements of the test standard. The data herein does not constitute a recommendation for, endorsement of, or certification of the product or material tested. ICC NTA makes no warranty, expressed or implied, except that the test has been performed, and data prepared, based upon the specimen furnished by the client. Extrapolation of data, from the test data provided herein, to the batch or lot from which the specimens were obtained may not correlate and should be interpreted with extreme caution. ICC NTA assumes no responsibility for variations in quality, composition, appearance, performance, or other features of similar materials produced by the client, other persons, or under conditions over which ICC NTA has no control. ICC NTA has issued this data summary for the exclusive use of the client to whom it is addressed. Any use or duplication of this summary shall not be made without their consent. This summary shall only be reproduced in its entirety.

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ASTM C0297-15 TEST Flatwise Tensile Strength 2020-04-07

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FCS071621-48 ASTM C0297-16 TEST (FINAL) Summary Out Data ICC NTA

Conditioning End Date: 9/17/2021

Sensor Asset No.: 00587

72.1

50.5

End Temperature (°F):

Start Humidity (%R.H.):

SUMMARY DATA ASTM C0297-16

Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions

Specimen Conditioning:

Conditioning Start Date: 9/14/2021 Start Temperature (°F): 72.5 Start Humidity (%R.H.): 54.6 Sensor Asset No.: 00587

S	Specimen	Table A1: Specimen Physical Pro Pre-Conditioning Average Measured Dimensions (in.)			Conditioned Weight
- 1	Number	Length	Width	Thickness	(lbm)
	135491	1.965	1.965	0.590	33.650
	135492	1.958	1.971	0.585	32.910
	135493	1.965	1.960	0.588	33.090
	135494	1.961	1.965	0.596	33.680
	135495	1.800	1.970	0.590	32.800
	Average	1.930	1.966	0.590	33.226

Measured Panel Thickness w/Sheathing:

0.59 -in.

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ASTM C0297-15 TEST Flatwise Tensile Strength 2020-04-07

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FCS071621-48 ASTM C0297-16 TEST (FINAL) Summary Out Data

ICC NTA

SUMMARY DATA ASTM C0297-16

Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions

Test Data:

Test Date: 09/23/21 Test Machine Description: Instron Series 5580 Load Frame (00140) Method of Bonding Specimens to Fixture Blocks: Adhesive; Environmental Chamber Conditions (If applicable): N/A

Speed of Testing: Data Sampling Rate: 0.005 in/min. 60 readings/min.

ſ	Specimen	Parent Specimen	Batch/Lot	Average 1	ditioning Measured ons (in.)	Cross- Sectional	Ultimate Force P _{max}	Ultimate Flatwise Tensile Strength F _z ^{ftu}	Elapsed Time ^a
L	Number	Number	Number	Length	Width	Area (in. ²)	(lbf)	(psi)	(min)
Г	135491	-		1.963	1.960	3.848	319	83	5
	135492			1.955	1.966	3.844	291	76	4
	135493			1.961	1.959	3.842	370	96	4
L	135494			1.962	1.962	3.849	303	79	6
	135495			1.968	1.954	3.845	95	25	4
						Subject of 10.51			
1		- 10-	Maximum	1.968	1.966	3.849	370	96	6
			Minimum	1.955	1.954	3.842	95	25	4
			Average	1.962	1.960	3.846	276	72	4.52
			Std. Dev.	0.005	0.005	0.003	105.21	27.37	
			COV (%)	0.24%	0.23%	0.07%	38.17%	38.18%	

^a Elapsed time from start of test until ultimate is required to be between 3 to 6 minutes

	Specimen Number	Parent Specimen Number	Failure Mode ^b		Notes
Γ	135491		CF	Core failure of specimen.	
	135492		CF	Core failure of specimen.	
	135493	1 1	CF	Core failure of specimen.	
	135494		CF	Core failure of specimen.	
	135495		CF	Core failure of specimen. Weak	s spot on corner caused instantaneous failure.
		^b Failure Mode	Definitions:	CF - Core Failure FT - Facing Tensile Failure	CFCF - Cohesive Failure of Core-Facing Adhesive AFCF - Adhesive Failure of Core-Facing Adhesive

This summary contains only data arrived at after employing the specific test procedures listed herein. This summary data might not include all reporting requirements of the test standard. The data herein does not constitute a recommendation for, endorsement of, or certification of the product or material tested. ICC NTA makes no warranty, expressed or implied, except that the test has been performed, and data prepared, based upon the specimen furnished by the client. Extrapolation of data, from the test data provided herein, to the batch or lot from which the specimens were obtained may not correlate and should be interpreted with extreme caution. ICC NTA assumes no responsibility for variations in quality, composition, appearance, performance, or other features of similar materials produced by the client, other persons, or under conditions over which ICC NTA has no control. ICC NTA has issued this data summary for the exclusive use of the client to whom it is addressed. Any use or duplication of this summary shall not be made without their consent. This summary shall only be reproduced in its entirety

ASTM C0297-15 TEST Flatwise Tensile Strength 2020-04-07

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Appendix C - Revision Log

<u>Rev. #</u>	Date	Page(s)	Revision(s)
0	10/29/2021	N/A	Original report issue

LGAI Technological Center S.A. Campus UAB Ronda de la Font del Carme, s/n E-08193 Bellaterra (Barcelona) T +34 93 567 20 00 www.appluslaboratories.com



SIMPLIFIED TEST CERTIFICATE

Nº 18/17705-2210M2-S

Bellaterra, 17th November 2021	Product:
FERRO COVERLINK, S.L.	SPRAY CORK BY
Avda. Real de Extremadura, 25	COVERLINK
12200 Onda (Castellón)	COVERLINK

PRODUCTS AND SYSTEMS FOR THE PROTECTION AND REPAIR OF CONCRETE STRUCTURES: Definitions, requirements, quality cntrol and evaluation of conformity. UNE_ EN 1504-2:2005. Part 2: Surface protection systems for concrete.

Performance characteristics		Results	Requirements				
1- Measurament of bond strength by pull-off, UNE- EN 1542:1999		1,0 MPa	Sistemas Flexibles		s Sistemas	Sistemas Rígidos	
			Without trafficking	With trafficckin	Without g trafficking	With trafficking	
			≥0,8 MPa	≥1,5 MPa	a ≥1,0 MPa	≥2,0 MPa	
	Water-vapour flow rate	0,0105 g/h	Diffusion-Equivalent air layer thickness Sd				
2- Determination of water-vapour transmission properties, UNE-EN ISO 7783:2012	Water-vapour transmission rate	26,6 g/m ² * d	Class I		Class II	Class III	
	Diffusion-Equivalent air layer thickness	0,8 m			5 ≤ Sd ≤ 50 m	Sd > 50 m	
	Water vapour resistance factor	416					
3- Determination of liquid-water transmission rate (permeability), UNE-EN 1062-3:2008		0,08 Kg/m ² h ^{0,5}	W < 0,1 Kg/m ² *h ^{0,5}				

Responsible for Construction Materials LGAI TECHNOLOGICAL CENTER, S.A. Technician Responsible LGAI TECHNOLOGICAL CENTER, S.A.

LGAI Technological Center S.A. Inscrita en el registro Mercantil de Barcelona, Tomo 35.803, Folio1, Hoja Nº B-266.627 Inscripción 1ª C.I.F. : A-63207492



למידע נוסף צרו קשר עם המומחים שלנו 04-8764444

