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TEST REPORT

CLIENT: **VIPEQ HISPANIA**

APPLICANT: **RAMON MILLAN AND JOSE LUIS VIANA**

ADDRESS: **POL. MOREA NORTE, C/D Nº 14**
31191 BERIAIN (NAVARRA)

MATERIAL TESTED: **SAMPLE OF CURED COATING**
REF. "VIPEQ WHITE"

PURPOSE OF THE REQUEST: **THERMAL CONDUCTIVITY**

DATE OF RECEIPT:	**12.11.2008**
DATE OF TEST COMMENCEMENT:	**22.12.2008**
DATE OF TEST COMPLETION:	**07.01.2009**
DATE OF ISSUE OF REPORT:	**05.11.2010**

The results compiled in this report refer only to the material received and submitted to testing at this Research Centre on the dates indicated.

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Energy Efficiency in Building
Architecture and Construction Technology

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Energy Efficiency in Building Manager
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SAMPLE CHARACTERISTICS

On 12 November 2008, CIDEMCO received from the company VIPEQ HISPANIA a sample of cured coating measuring (150x150x20) mm with the following reference:

"VIPEQ WHITE"

The technical data sheet for the product tested, provided by the client, is included in the appendix.

TEST REQUESTED

The test requested was the **thermal conductivity** test in accordance with internal procedure based on Fourier's Law.

Reason for the amendment: Updating of the client and applicant due to a change in the company's name.

TEST PERFORMED

Hypothesis of measurement

The thermal conductivity of the material received was determined in accordance with Fourier's Law, which states that the heat flow along one direction is proportional to the area and to the gradient of temperatures along that direction. This coefficient of proportionality, *K*, is the thermal conductivity.

Description of the equipment

The equipment essentially consists of a heat source (at homogenous temperature) and a block of Al or Cu, with well-determined specific heats depending on the temperature, duly insulated.

The panel of the material whose thermal conductivity we wish to measure is placed between the heat source and the metal block. On each surface of the panel we place two identical thermocouples connected to a computer which enable the temperature to be measured with an accuracy of 0.05º C.

The heat source is situated at a temperature slightly higher than room temperature. Once the temperature has stabilised, the temperatures of the two thermocouples are recorded at intervals of 1 s. Due to the fact that the variations in the temperatures are fairly slow, so as to be considered in a quasi-steady state, Fourier's Law can be applied.

Under these circumstances, the heat flow that reaches the panel of metal (Al or Cu) is used by increasing its temperature so that

$$\Phi = \frac{\delta Q}{dt} = m\,c_m \frac{dT_2}{dt} = K\,A\frac{\Delta T}{\Delta x} \qquad (1)$$

where: m is the mass of the metal block
c_m is its specific heat
Δx the thickness of the panel
A the section of the metal block,
T_2 is the temperature of the cold surface of the panel
$\Delta T = T_1 - T_2$ the difference in temperatures between its two sides.

Incorporating the above expression, the following expression is reached:

$$T_1 - T_2 = I \cdot e^{-\frac{K\,A}{m\,c_m\,\Delta x}\cdot t} \qquad (2)$$

RESULT

Adjusting the variation in the difference of temperatures with the time, t, to expression (2) we obtain the following value for the thermal conductivity:

$$K = 0{,}068 \pm 0{,}004\ \frac{W}{m \cdot K} \quad a\ 27^{\circ}C$$

APPENDIX

VIPEQ HISPANIA
CORCHO NATURAL
en emulsión proyectado

Polígono Morea Norte, C/ D Nº 14
Tfno. y Fax: 948 31 24 13
31191 - BERIAIN (Navarra)

Revisión: 1

FICHA TÉCNICA

VIPEQ

DESCRIPCIÓN

PRODUCTO AISLANTE TERMICO-ACUSTICO CON FUNCIÓN DECORATIVA

CARACTERÍSTICAS

VIPEQ-F08 es una mezcla de partículas de corcho seleccionadas, con diferentes tipos de resinas en base agua, cargas minerales, estabilizantes y aditivos varios.

ESPECIFICACIONES

Aspecto	Producto pastoso
Color	Natural Blanco Carta de colores
Densidad	0,5-0,7 g/cm^3

APLICACIONES

VIPEQ-F08 tiene buena adherencia sobre la mayoría de materiales (mortero, metal,madera,P.V.C.,polietileno expandido,etc.) y es idóneo para:

-Revestimiento de fachadas (decorándolas y aislándolas térmicamente).

-Impermeabilización de cubiertas de todo tipo (tela asfáltica, chapa, uralita), aportando en la misma aplicación un aislamiento térmico.

-Decoración de interiores y corrección acústica de locales.

Y un largo etcétera que convierten a VIPEQ-F08 en un material único.

MODO DE EMPLEO

La forma de aplicación puede ser manual, con herramienta convencional (llana,espátula);o mecánica , mediante proyección con máquina.

Secado al tacto..... .....30 minutos (Temperatura ambiente 20ºC)
Secado total.....12-24 horas (Capa de 3-8 mm)
Rendimiento.....1,2-1,5 kg/m^2 (variable en espesor)
Temperatura de aplicación.....-2ºC y +45ºC

RECOMENDACIONES

El soporte debe estar limpio, exento de polvo y seco.

ALMACENAMIENTO

El producto no debe ser expuesto a la acción directa del sol ni a temperaturas superiores a 45 ºC ni menores de -2ºC.

PRESENTACIÓN

Envases de 12 kg.

FRASES R/S Y SÍMBOLOS DE RIESGO

S2	Manténgase alejado de los niños.
S7	Mantener el envase bien cerrado.

La información y recomendaciones indicados en esta hoja técnica corresponden a nuestros conocimientos actuales, pruebas de laboratorio y experiencias habituales. Por tal motivo, nuestra garantía se limita a la calidad del producto suministrado. Esta empresa no asumirá responsabilidades derivadas del mal uso de nuestros productos.