



**Geoscience LTD**  
a research and development organization

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Date: May 23, 2006

To: Gil Yanai, R & D Manager Fax: 972-4-6372047  
Polyon Barkai Industries

From: H. F. Poppendiek

Subject: The first ASTM C 1363 R value test results for Polynum ULTRA

Following you will find the subject test results.

We have made R value Prediction calculations and find that for this panel orientation and an  $E = 0.05$ , the R value is about 17 to 18 hr ft<sup>2</sup> °F/Btu.

Test results for  $t_m$  in the 60°F range will come to you tomorrow.

Regards,

H. F. Poppendiek



**geoscience LTD**  
LABORATORY TESTING DIVISION

6260-B Marindustry Drive

San Diego, CA 92121



The laboratory is accredited by NVLAP of the U.S. Department of Commerce as having the competence to perform specified tests in accordance with prescribed test methods and accreditation criteria.

NVLAP LAB CODE 100142-0

**PROPERTY CERTIFICATION**

**CLIENT:** Polyon Barkai Industries Ltd.    **DATE:** May 23, 2006  
Kibbutz Barkai  
M.P. Menasha  
37860 Israel

**MATERIAL INVESTIGATED:**

Polynum ULTRA mounted in a test frame as shown in Figure 1

Authorization by Mr. Gil Yanai (Fax of May 9, 2006)

**PROPERTY MEASURED:**

R value for Heat Flow Down for  $t_m = 73^\circ\text{F}$  and  $\Delta t = 33.0^\circ\text{F}$

**MEASUREMENT METHOD:**

The Guarded Hot Box Method (following the procedures of ASTM C 1363)

**RESULTS:**

$$t_m = 73.0^\circ\text{F} \quad (22.8^\circ\text{C})$$

$$t_H - t_C = 88.8^\circ\text{F} - 55.8^\circ\text{F} = 33.0^\circ\text{F} \quad (18.3^\circ\text{C})$$

$$P_e = 3.1 \text{ watts}$$

$$\frac{q}{A} = 1.488 \text{ Btu/hr ft}^2$$

$$R\text{value} = 21.1 \text{ hr ft}^2 \text{ }^\circ\text{F/Btu} \quad (3.72\text{Km}^2/\text{W})$$

\* Details of the investigation are not included in this Property Certification; the results presented here apply only to the samples tested.

*H. E. Poppendiek*  
CERTIFYING OFFICER: H. E. Poppendiek

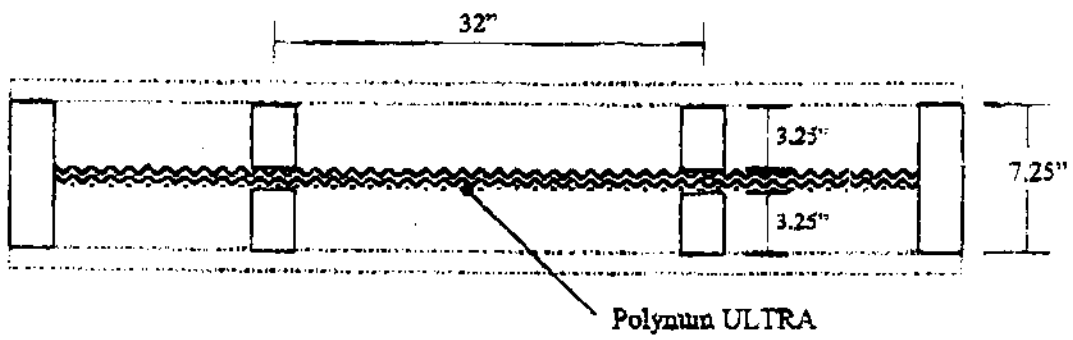


Figure 1