TECHNICKÝ A ZKUŠEBNÍ ÚSTAV STAVEBNÍ PRAHA, s.p.
Technical and Test Institute for Construction Prague
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TEST REPORT

issued by Testing Laboratory No. 1018.3
accredited pursuant to ČSN EN ISO/IEC 17025 by the Czech Accreditation Institute, o.p.s.

No. A 020 - 029531

On test – on thermal conductivity coefficient and density

Ordering Party:	GlassRock Insulation Company S.A.E
Address:	28 Road 265 New Maadi, 11435 Cairo, Egypt
Comp. Id. No.-Tax Id. No.:	
Manufacturing Plant:	GlassRock Insulation Company S.A.E
Address:	Free Zone, 7th district, Plot 7059, 7057 Sadat Industrial City, Menofaya, Egypt
Test sample:	Thermal insulation panels of mineral wool
Order No.:	Z 020 13 0118

Number of pages of the Test Report incl. title page: 3 Number of Annexes: 0

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České Budějovice, 16th August 2013

Declaration: 1) The test results in this test report relate only to the tested article and they do not substitute any other documents.
2) The Test Report must be copied as a whole only otherwise a written consent of the testing laboratory is needed.

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1. General

Upon the order of 13th March 2013, the tests on thermal conductivity of the thermal insulation panels of mineral wool for buildings supplied by GlassRock Insulation Company S.A.E, 28 Road 265 New Maadi, 11435 Cairo, Egypt were carried out in order to determine the declared thermal values.
(Order No. Z020130118).

2. Technical description of the scope of the test

The scope of the test was to determine the declared thermal values of the measurement of the thermal conductivity coefficient (ČSN EN 12667) and to determine density (ČSN EN 1602) of the thermal insulation panels of mineral wool for buildings.

3. Identification, sampling, acceptance and preparation of samples

A check package of the thermal insulation panels of mineral wool of size of c. 1200x600x100 mm was supplied to TZÚS Prague, České Budějovice office, for the purposes of the test on the thermal conductivity and on determination of density. The panels were marked with a sample number and stored under laboratory conditions (23±2°C / 50±5% of relative humidity) until the tests were carried out.
Samples of size of c. 240x240x100 mm were cut for the purposes of the test on thermal conductivity and on determination of density.

Test sample: RWB090100UF
RockWool Boards, 90 kg/m^3, thickness 100 mm
The samples are recorded under number: 390l

4. Test date

The measurement was taken on 5th August 2013

5. Testing regulations used

ČSN EN 13162	Thermal insulation products for buildings - Factory made mineral wool (MW) products – Specification.
ČSN EN 1602	Thermal insulating products for building applications - Determination of the apparent density
ČSN EN 12667	Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods - Products of high and medium thermal resistance.

6. List of devices and measuring instruments used

	reg. No.
Slide calliper 0 - 300 mm	172
Sartorius scales 0 – 3,000 g	227
Steel tape measure 2m – 0 - 2,000 mm	637

The devices and measuring instruments are certified pursuant to the Weight and Measures Rules in force at TZÚS in České Budějovice.

7. Test results.

7.1 Determination of thermal conductivity coefficient and density

(ČSN EN 12667, ČSN EN 1602)

Thermal-technical values measured at mean temperature of 10°C.

Tab. 1

sample number	thermal conductivity coefficient [$Wm^{-1}K^{-1}$]	average thermal conductivity coefficient [$Wm^{-1}K^{-1}$]	average density [kgm^{-3}]
390l/1	0.0305	0.0311	82.5
390l/2	0.0306		
390l/3	0.0305		
390l/4	0.0314		
390l/5	0.0312		
390l/6	0.0314		
390l/7	0.0310		
390l/8	0.0312		
390l/9	0.0312		
390l/10	0.0317		

The average measured value of the thermal conductivity coefficient of the tested samples of MW is:

$\lambda_{90/90}$ = 0.0311 + (2.07 x 0.0004) = 0.0319 $Wm^{-1}K^{-1}$

$\lambda_{90/90}$ = 0.0319 $Wm^{-1}K^{-1}$

$R_{90/90}$ = 0.100 : $\lambda_{90/90}$ = 3.135 m^2KW^{-1}

8. Conclusion

The results of the measurement of the thermal conductivity and of the determination of density of the thermal insulation panels of mineral wool for buildings supplied by GlassRock Insulation Company S.A.E, 28 Road 265 New Maadi, 11435 Cairo, Egypt are given in Table 1 in Clause 7 of this Test Report.

Declared values: λ_D = 0.032 $Wm^{-1}K^{-1}$

R_D = 3.10 m^2KW^{-1}

E N D O F T H E T E S T R E P O R T

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