

## Hardrock Energy d=50-160mm

- Unique identification code of the product-type:  
**RW-PL-G-1043-I**
- Type and serial number allowing identification of the product:  
**Hardrock Energy d=50-160mm; MW-EN 13162-T5-CS(10)30-TR10-PL(5)500-WS- WL(P) MU1**
- Intended use of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer: **Thermal insulation products for buildings(ThIB)**
- Name, registered trade name or trade mark and contact address of the manufacturer as required under article 11(5): **ROCKWOOL® Hungary Kft, Keszthelyi út 53, Tapolca H-8300**
- Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2):  
*not applicable*
- System of attestation of conformity: **System 1+ System 3**
- Notified Certification body **ÉMI Építésügyi Minőségellenőrző Innovációs Nonprofit Kft.,** Diószegi út 37, Budapest HU-1113 No. 1415 performed, carried out the initial type testing, the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity (test report) No. 1415-CPR-3-(C-7/2010)
- Not applicable*
- Declared Performance in the Table 1 and Table 2

Table 1

Essential Characteristics	Clauses in this and other European standard(s) related to essential characteristics	Harmonized standard EN 13162:2012	Declared value / NPD <sup>1)</sup>
Reaction to fire	4.2.6 Reaction to fire	Euroclasses	<b>A1</b>
Release of dangerous substances to the indoor environment	4.3.13 Release of dangerous substances	EU level not yet available	<sup>c)</sup>
Acoustic absorption index	4.3.11 Sound absorption	$\alpha_p$ (API <sup>a)</sup> ) and $\alpha_w$ (AWI <sup>a)</sup> ) declared	<b>NPD</b>
Impact noise transmission index (for floors)	4.3.9 Dynamic stiffness	$s'$ , SDI <sup>a)</sup> declared	<b>NPD</b>
	4.3.10.2 Thickness, $d_L$	$d_L$ declared and classes for thickness tolerances T6 or T7	<b>NPD</b>
	4.3.10.4 Compressibility $c$	CPI <sup>a)</sup> declared	<b>NPD</b>
	4.3.12 Air flow resistivity	AFI <sup>a)</sup> declared. Direct airborne sound insulation index	<b>NPD</b>
Direct airborne sound insulation index	4.3.12 Air flow resistivity	AFI <sup>a)</sup> declared.	<b>NPD</b>
Continuous glowing combustion	4.3.15 Continuous glowing combustion	EU level not yet available	<sup>c)</sup>
Thermal resistance	4.2.1 Thermal resistance and thermal conductivity	Declared R and $\lambda$ if possible	See table 2 <b>0,036 W/mK</b>
	4.2.3 Thickness	T <sup>a)</sup> class for thickness tolerance	<b>T5</b>
Water permeability	4.3.7.1 Short term water absorption	WS- declared $W_p$	<b>≤ 1 kg/m2</b>
	4.3.7.2 Long term water absorption	WL(P) -declared $W_p$	<b>≤ 3 kg/m2</b>
Water vapour permeability	4.3.8 Water vapour transmission	Declared $\mu$ ; (MUI <sup>a)</sup> ) or Z <sup>a)</sup>	<b>MU1</b>
Compressive strength	4.3.3 Compressive stress or compressive strength	CS(10) <sup>a)</sup> or CS(10(Y)) <sup>a)</sup> declared	<b>≥ 30 kPa</b>
	4.3.5 Point load	PL(5) <sup>a)</sup> declared	<b>≥ 500 N</b>
Durability of reaction to fire against heat, weathering, ageing/degradation	4.2.7 Durability characteristic	Reaction to fire as declared by 4.2.6	<b>not change with time</b>
Durability of thermal resistance against heat, weathering, ageing/degradation	4.2.1. Thermal resistance and thermal conductivity	Declared R and $\lambda$ if possible	<b>not change with time</b>
	4.2.7 Durability characteristics	DS(70,-) declared; The relative changes in thickness	<b>NPD</b>
	4.3.2 Dimensional stability under specified temperature or under specified temperature and humidity conditions	DS(70,90) declared; The relative changes in thickness	<b>NPD</b>
Tensile strength	4.3.4 Tensile strength perpendicular to faces	TRI <sup>a)</sup> declared	<b>≥ 10 kPa</b>
Durability of compressive strength against ageing/degradation	4.3.6 Compressive creep	CC( $i_1$ , $i_2$ <sup>a)</sup> ) $\sigma_c$ compressive creep declared $X_{c1}$ and $X_{c2}$	<b>NPD</b>

<sup>1)</sup> no performance determined <sup>a)</sup> "a" indicates relevant class of level or declared value <sup>b)</sup> national regulations not available <sup>c)</sup> according to national regulations; see: Safety Use Instruction Sheet

Table 2

Thermal resistance, $R_p$														
d(mm)	20	30	40	50	60	80	100	110	120	140	160	180	200	220
$R_p$ (m <sup>2</sup> K/W)	--	--	--	1,35	1,65	2,20	2,75	3,05	3,30	3,85	4,40	5,00	--	--

NOTE: R value for thickness not seen in Table 2, is available on product label

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in Table 1 and Table 2 of point 9. This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Tapolca, 01. 2014.

Frank Christian Bartel  
Technical and Production Director