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Die Akkreditierung gilt für die in der Urkundenanlage  
D-PL-11217-01-01 aufgeführten Prüfverfahren.

Project:	Contract for Testing, Surveillance and Certification No. 11/2362
Producer/plant:	ROYAL EL MINYA CEMENT COMPANY/EI Minya
Order date:	29.03.2011
Purpose of sampling:	Test according to EN 197-1 / Audit sampling R 1 / 2019
Product:	Portland-cement EN 197-1:2011 - CEM I 52,5 R
Quantity:	5 kg Portland cement EN 197-1 – CEM I 52,5 R
Samplers/Label:	SGS, -
Day of delivery:	27.03.2019
Test period:	April - May 2019

Berlin, 09.05.2019



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Head of laboratory

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Testing

## 1. TEST RESULTS

### 1.1 Specific Surface, Setting Time and Soundness

Determination of setting time and soundness acc. to DIN EN 196-3:2017-03 and of specific surface acc. to DIN EN 196-6:2010-05

attributes	Test result	Requirement	Evaluation
Specific surface <sup>1)</sup> [cm <sup>2</sup> /g]	6.116	-	-
Initial Setting time <sup>2)</sup>	95 min.	≥ 45 min	<b>fulfilled</b>
Finish	145 min.	-	-
Soundness <sup>3)</sup> [mm]	0,5	≤ 10	<b>fulfilled</b>

<sup>1)</sup> Blaine, density: 3,08 g/cm<sup>3</sup> / porosity: e = 0,50

<sup>2)</sup> Vicat-device, Standard consistence: 32,0%

<sup>3)</sup> Le-Chatelier

### 1.2 Compressive Strength

Determination of strength acc. to DIN EN 196-1:2016-11

Prism	Compressive strength [MPa]		
	Early strength		Standard strength
No.	2 days testing day: 26.04.2019	7 days	28 days testing day: 29.04.2019
1	44,3	-	66,3
	44,8	-	64,4
2	45,5	-	65,1
	44,9	-	64,7
3	45,5	-	65,5
	42,3	-	66,6
<b>Main value</b>	<b>44,5</b>	-	<b>65,5</b>
Requirement	≥ 30	-	≥ 52,5
<b>Evaluation</b>	<b>fulfilled</b>	-	<b>fulfilled</b>

### 1.3 Chemical Analysis

Determination of chemical properties acc. to DIN EN 196-2:2013-10

Property	Test result [mass-%]	Requirement [mass-%]	Evaluation
Loss on ignition	2,05	≤ 5,0	<b>fulfilled</b>
Insoluble residue	0,24	≤ 5,0	<b>fulfilled</b>
Sulfate content (as SO <sub>3</sub> )	3,29	≤ 4,0	<b>fulfilled</b>
Chloride content (Cl <sup>-</sup> )	0,06	≤ 0,10	<b>fulfilled</b>