



**CEMENTOS ALFA, S.A.**

**PLANT: MATAPORQUERA**

ER Certificate: ER-0572/1998



**TECHNICAL CHARACTERISTICS CERTIFICATE**

**Cement**

**CEM I 42,5 R**

**N: 015/001358  
CE: 0099/CPR/A33/0154**

**Period**

**November, 2016**

TESTS	Results Average Value	Standard Spec. EN/UNE
<b>Chemical Characteristics</b>		
Loss on Ignition %	2,7	< 5,0
Insoluble Residue %	0,4	< 5,0
Sulphates (SO <sub>3</sub> ) %	3,2	< 4,0
Chlorides %	0,01	< 0,10
<b>Physical and Mechanical Characteristics</b>		
Normal Consistency Water %	30,1	
Initial Setting Time min	174	> 60
Final Setting Time min	223	< 720
Soundness Le Chatelier mm	0,2	< 10
Specific Surface (Blaine) cm <sup>2</sup> /g	3863	
Compressive Strength at 2 days MPa		
• Monthly average	31,7	> 20,0
• Cumulative average (12/2015 - 11/2016)	34,6	> 20,0
• Cumulative Std. Dev. (12/2015 - 11/2016)	1,8	
Compressive Strength at 28 days MPa		
• Monthly average	56,0	42,5 - 62,5
• Cumulative average (12/2015 - 11/2016)	57,2	42,5 - 62,5
• Cumulative Std. Dev. (12/2015 - 11/2016)	1,7	

This document doesn't imply that any amount of cement has been supplied by the Company

Barrio la Estación, s/n.  
39410 Mataporquera (Cantabria)  
Tel. 942 770 058  
Fax 942 770 243  
info@alfainforma.com  
www.valderrivas.es

Chief of Quality Control

