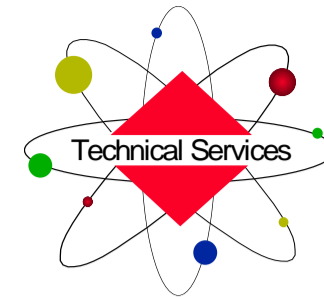




**We Commit. We Do.**  
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# TYPE CPJ-CEM II/A 42.5 PM UT

## Ciment Tropical (PM)



**Issued to: Export Manager**  
**Vessel: BBC Baltic**  
**Voyage Number: 1001**  
**Code Number: 110915-647-CT**

		Test Result		Requirements	
				NF P 15-301	
<b><u>Compressive Strengths</u></b>					
ISO-CEN Prism	2 Days	<b>25.3</b>	<b>MPa</b>	42.5 Mpa (min)	62.5 Mpa (max)
	7 Days	<b>41.8</b>	<b>MPa</b>		
	28 Days	<b>57.5</b>	<b>MPa</b>		
<b><u>Physical Properties</u></b>					
Setting Time Initial		<b>135</b>	<b>minutes</b>		
Setting Time Final		<b>3:45</b>	<b>hours</b>		
Specific Surface		<b>320</b>	<b>m<sup>2</sup>/Kg</b>		
<b><u>Chemical Properties</u></b>					
Insoluble Residue (IR)	(Typical)	<b>2.20</b>	<b>%</b>		
SiO <sub>2</sub>		<b>21.49</b>	<b>%</b>		
Al <sub>2</sub> O <sub>3</sub>		<b>4.41</b>	<b>%</b>		
Fe <sub>2</sub> O <sub>3</sub>		<b>2.30</b>	<b>%</b>		
CaO		<b>62.65</b>	<b>%</b>		
Magnesia (MgO)		<b>1.05</b>	<b>%</b>		
Sulphur Trioxide (SO <sub>3</sub> )		<b>2.27</b>	<b>%</b>	3.5% (max)	
Ignition Loss (LOI)		<b>3.57</b>	<b>%</b>		
Na <sub>2</sub> O (Sodium)		<b>0.34</b>	<b>%</b>		
K <sub>2</sub> O (Potassium)		<b>0.51</b>	<b>%</b>		
Soda Equivalent (Na <sub>2</sub> O + 0.658 K <sub>2</sub> O)		<b>0.67</b>	<b>%</b>		
Freelime CaO		<b>1.09</b>	<b>%</b>		
<b><u>Potential Compounds</u></b>					
Tricalcium Silicate (C3S)		<b>52.3</b>	<b>%</b>		
Dicalcium Silicate (C2S)		<b>22.1</b>	<b>%</b>		
Tricalcium Aluminate (C3A)		<b>7.8</b>	<b>%</b>		
Tetracalcium Alumino Ferrite (C4AF)		<b>7.0</b>	<b>%</b>		

Note: No adjustment has been made to the Potential Compounds for the presence of mineral additions.

The above sample was tested as received in accordance with the current terms of registration and methods stated in NZS 3122:2009 with the exception of;

- Chemical Analysis to ASTM C114-10

*THIS REPORT MUST NOT BE REPRODUCED EXCEPT IN FULL*

### Typical Properties of Ciment Tropical (PM)

Composition:	Clinker:	85%
	Limestone	7%
	Gypsum	5%
	Secondary	3%

*Jim White*

**Jim White**  
Quality System Co-ordinator

**6/10/2011**