

# SUPRATEK CEM I 42,5R PORTLAND CEMENT

## Production Sites

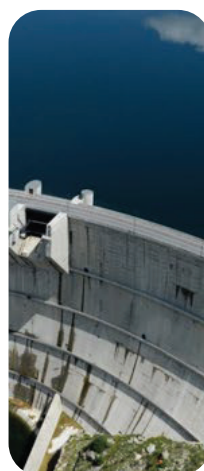
Secil-Outão Plant  
Maceira-Liz Plant

## Packaging

Bulk  
25kg sacks

## Certification

Cement certified according to NP EN 197-1.  
Certificate of Performance and Declaration of Performance  
0856-CPR-0118 (Secil-Outão) and 0856-CPR-0124 (Maceira-Liz)



<b>Product Composition (Cement Core)</b>	95% to 100% Portland Clinker 0% to 5% Other Constituents
<b>Main Characteristics</b>	Grey-coloured, high-heat cement. Very quick development of initial resistance (high initial resistance). Final resistances within the rated class values (resistance at 28 days).
<b>Main Applications</b>	<p>CEM I 42.5R White Portland Cement is a high quality, high performance product, widely used in civil engineering works and in the manufacture of high and very high resistance concrete. It is particularly suited to works where a very high resistance is required on the first days after application.</p> <p>The main applications of this cement are:</p> <ul style="list-style-type: none"><li>• ready-mixed or cast in-situ high and very high initial or final resistance concrete;</li><li>• high resistance lightweight concrete;</li><li>• early prestressed concrete;</li><li>• concrete cast in cold weather;</li><li>• prestressed lightweight and heavyweight prefabrication with high turnover of moulds and formwork;</li><li>• sealing and grouting.</li></ul>
<b>Specific Warnings</b>	<p>The correct development of resistance is very sensitive to the curing process.</p> <ul style="list-style-type: none"><li>• care should be taken to avoid drying of all concreted parts;</li><li>• concreting in very hot weather should be avoided.</li></ul> <p>This cement enables high mechanical performance concrete to be manufactured, but the prior study of compositions is recommended to achieve the best performance.</p> <p>The use of this cement is compatible with the introduction of latent hydraulicity additions and the use of admixtures is normal to improve workability with a possible reduction in the water/cement ratio.</p>
<b>Safety Notice</b>	<p>Handling powder cement may cause irritation to the eyes or airways. When mixed with water, it can also cause sensitive skin.</p> <p>The use of a dust mask, goggles, safety gloves and overalls is recommended to protect the hands and the skin.</p> <p>For detailed information refer to the Safety Datasheet.</p>



## CHEMICAL CHARACTERISTICS

Properties	Testing Method	Specified Value (1)
Loss on Burning	NP EN 196-2	$\leq 5,0\%$
Insoluble Residue	NP EN 196-2	$\leq 5,0\%$
Sulphate Content (in $\text{SO}_3$ )	NP EN 196-2	$\leq 4,0\%$
Chloride Content	NP EN 196-2	$\leq 0,10\%$

(1) The percentages refer to cement paste.

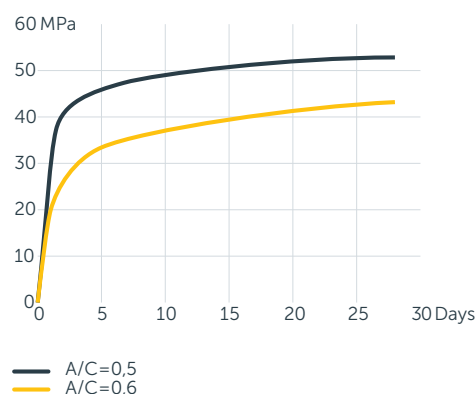
## MECHANICAL CHARACTERISTICS

Compressive Strength (MPa)		
Resistance during the first days		Reference resistance NP EN 196-1
2 days	7 days	28 days
$\geq 20$	-	$\geq 42,5$ e $\leq 62,5$

## PHYSICAL CHARACTERISTICS

Properties	Testing Method	Specified Value
Start of Setting	NP EN 196-3	$\geq 60$ min
Expandability	NP EN 196-3	$\leq 10$ mm

Indicative average values of compressive strength of concrete manufactured with  $350 \text{ kg/m}^3$  of CEM I 42.5R cement



## CUSTOMER SERVICE

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