



# الشركة العربية اليمنية للإسمنت المحدودة Arabian Yemen Cement Company Ltd

## Quality Control Department

YCC/QC/Spec/BS&ASTM/03

Date of Issue: 16-Mar-15

### Sulphate Resistant Cement (SRC)

In accordance with British Standard Specifications

BS 4027:1996 42.5N & ASTM C 150 Type-V

Chemical Tests		Unit	Std. Specifications					Test Results
			BS 4027:1996		ASTM C 150 - Type -V			
			Max.	Min.	Test Code	Max.	Min.	
Silicon dioxide	SiO <sub>2</sub>	%	-	-	C 114-6	-	-	21.30
Aluminum Oxide	Al <sub>2</sub> O <sub>3</sub>	%	-	-	C 114-7	-	-	4.00
Ferric Oxide	Fe <sub>2</sub> O <sub>3</sub>	%	-	-	C 114-8	-	-	5.41
Calcium Oxide	CaO	%	-	-	C 114-13	-	-	63.66
Magnesium Oxide	MgO	%	5.00	-	C 114-14	6.00	-	1.12
Potassium Oxide	K <sub>2</sub> O	%	-	-	C 114-17	-	-	0.30
Sodium Oxide	Na <sub>2</sub> O	%	-	-	C 114-17	-	-	0.20
Sulphuric anhydride	SO <sub>3</sub>	%	2.50	-	C 114-15	2.30	-	2.00
Chloride	Cl	%	0.10	-	C 114-19	-	-	0.02
Alkalies Eq. as Na <sub>2</sub> O		%	-	-	-	-	-	0.40
Loss on Ignition	L.O.I.	%	3.00	-	C 114-16	3.00	-	1.30
Insoluble Residue	I.R.	%	1.50	-	C 114-5.1	0.75	-	0.44
Tricalcium Aluminate	C3A	%	3.50	-	-	5.00	-	1.46
Tetracalciumaluminoferrite	C4AF	%	-	-	-	-	-	16.45
C4AF + 2 (C3A)		%	-	-	-	25.00	-	19.36

Physical Tests		Unit	Std. Specifications					
			BS 4027:1996		ASTM C 150 Type-V			
			Max.	Min.	Test Code	Max.	Min.	
Fineness, Specific surface	Blaine	M <sup>2</sup> /kg	-	-	C 204	-	280	319
Setting Time	Initial	Minutes	-	60	C 191	-	45	195
	Final	Minutes	-	-	C 191	375	-	270
Early Stiffening		%	-	-	C 451	-	50	87
Soundness	Le Chatelier	mm	10	-		-	-	1.0
	Autoclave	%	-	-	C 151	0.80	-	0.06
Compressive Strength	2 Days	MPa	-	10	C 109	-	-	17.0
	3 Days	MPa	-	-		-	8.00	(18.5)*
	7 Days	MPa	-	-		-	15.00	28 (26.5)*
	28 Days	MPa	62.5	42.5		-	21.00	55 (44)*

()\* - For ASTM results

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