



شركة الاسمنت الفالكون  
البالستانية المحدودة

# ATTOCK CEMENT PAKISTAN LTD.

## QUALITY CERTIFICATE

Dated : 19.08.2019

We hereby Certify that our brand "FALCON BLOCK CEMENT" Ordinary Portland Cement Conforms and surpasses the Pakistan Standard PS-232-2008 \* (43 grade) & British Standard Specifications BS-12-1978.

CHEMICAL COMPOSITION	FALCON BLOCK CEMENT	PS-232 - 2008 * (43 grade)	BS - 12 - 1978
Calcium Oxide, (CaO) %	63.02	-	-
Silicon Dioxide, (SiO <sub>2</sub> ) %	20.88	-	-
Aluminium Oxide, (Al <sub>2</sub> O <sub>3</sub> ) %	4.81	-	-
Ferric Oxide, (Fe <sub>2</sub> O <sub>3</sub> ) %	3.84	-	-
Magnesium Oxide, (MgO) %	1.48	6.00 max.	4.00 max.
Sulphur Trioxide, (SO <sub>3</sub> ) %	2.41	3.00 max.	3.00 max
Loss on Ignition, (L.O.I) %	2.47	5.00 max.	3.00 max
Insoluble Residue, (I.R)%	0.35	3.00 max.	1.50 max.
Sodium Oxide, (Na <sub>2</sub> O) %	0.21	-	-
Potassium Oxide, (K <sub>2</sub> O) %	0.51	-	-
Total Alkalies as Na <sub>2</sub> O = (Na <sub>2</sub> O + 0.658 x K <sub>2</sub> O), %	0.54	-	-
Chloride, (Cl <sup>-</sup> ) %	0.012	-	-
Silica Modulus (S.M)	2.41	-	-
Alumina Modulus (A.M)	1.25	0.66 min.	-
Lime Saturation Factor (L.S.F)	0.92	0.66 - 1.02	0.66 - 1.02
Tri Calcium Silicate (C <sub>3</sub> S)	53.19	-	-
Di Calcium Silicate (C <sub>2</sub> S)	19.73	-	-
Tri Calcium Aluminate (C <sub>3</sub> A)	6.26	-	-
Tetra Calcium Alumino Ferrite (C <sub>4</sub> AF)	11.68	-	-
<b>PHYSICAL TEST :</b>			
Fineness (Blaine cm <sup>2</sup> /gm)	3230	2250 min.	2250 min.
<b>SETTING TIME :</b>			
Initial (minutes)	97	30 min.	45 min.
Final (minutes)	171	600 max.	600 max.
Consistency (H <sub>2</sub> O)%	26.40	-	-
Soundness Expn.(Le Chatlier mm)	0.70	10 max.	10 max.
<b>COMPRESSIVE STRENGTH :</b>			
3-Days N/mm <sup>2</sup> (Psi)	36.29 (5262)	23.00 (3335)	23.00 (3335)
7-Days N/mm <sup>2</sup> (Psi)	46.69 (6769)	Optional 33.00 (4785)	-
*28-Days N/mm <sup>2</sup> (Psi)	55.93 (8110)	43.00 (6235)	41.00 (5945)

\*last month 28-Days Compressive Strength.

HOD ( QUALITY CONTROL )

Sr. GENERAL MANAGER (WORKS)

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