



QUALITY CERTIFICATE

DESCRIPTION OF GOODS: PORTLAND CEM I / 42,5R CE PM NF (ELOT EN 197-1)
 PRODUCTION PLANT: THESSALONIKI
 THESSALONIKI PLANT POSSESSES THE QUALITY SYSTEM
 CERTIFICATE OF CONFORMITY No. 0654 - CPR- 0080
 ACCORDING TO ELOT EN ISO 9001 : 2015, TO NF EN 197-1, NF 002, NF P15-317
 B/L DATE : 28/4/2022
 NAME OF MV :
 RECEIVER : INTERTITAN EMPORIKI DIETHNIS S.A. (ETABLE. DE MARSEILLE)
 QUANTITY :

TEST CHARACTERISTICS	REQUIREMENTS	TEST RESULTS ACCORDANCE WITH EN 196 (Typical Analysis)
	EN 197-1 CEM I 42,5 R	
CHEMICAL ANALYSIS (%)		
Silica (SiO ₂)	-	19,91
Insoluble residue	max 5,0	0,33
Alumina (Al ₂ O ₃)	-	5,01
Ferric Oxide (Fe ₂ O ₃)	-	3,15
Lime (CaO)	-	63,71
Magnesium Oxide (MgO)	-	1,70
Sulphuric Anhydride (SO ₃)	max. 3,5	2,45
Loss on ignition	max 5,0	2,71
Potassium Oxide (K ₂ O)	-	1,02
Sodium Oxide (Na ₂ O)	-	0,34
Free Lime	-	1,50
Total Alkalies	-	1,01
CO ₂	-	1,75
Chloride (Cl)	max. 0,10	0,03
C ₃ S	-	50,26
C ₂ S	-	19,05
C ₃ A	-	7,95
C ₄ AF	-	9,58
C ₃ A +0,27C ₃ S	-	21,52
Cr+6 (ppm)	max. 2,0	0,05
Physical tests		
Initial Setting time (minutes)	min. 60	180
Final Setting time (minutes)	-	205
Soundness expansion as received (mm)	max. 10	1,0
Fineness, specific surface (cm ² /gr)	-	4340
Compressive Strength		
Mortar (N/mm ²)	-	-
Age 2 days	min 20	31,0
Age 7 days	42,5 62,5	43,0
Age 28 days	-	57,0

REMARKS: We hereby certify that cement shipped is in full conformity with the above mentioned specifications.



TITAN CEMENT Co
 Haikidos 22A, 11143
 ATHENS
 GREECE
 THESSALONIKI PLANT
 THESSALONIKI
 13
 0654- CPR-0080
 EN 197-A
 CEM I 42.5 R

QUALITY CONTROL MANAGER

 N. MANARIS