


C150/C150M – 12

ABC Portland Cement Company
Qualitytown, N.J.

Plant Example

Cement Type II(MH)

Date March 9, 20xx

Production Period March 2, 20xx – March 8, 20xx

STANDARD REQUIREMENTS
ASTM C150 Tables 1 and 3

CHEMICAL			PHYSICAL		
Item	Spec. Limit	Test Result	Item	Spec. Limit	Test Result
SiO ₂ (%)	^A	20.6	Air content of mortar (volume %)	12 max	8
Al ₂ O ₃ (%)	6.0 max	4.4	Blaine fineness (m ² /kg)	260 min 430 max	377
Fe ₂ O ₃ (%)	6.0 max	3.3	Autoclave expansion (%)	0.80 max	0.04
CaO (%)	^A	62.9	Compressive strength (MPa)	min: ^A	
MgO (%)	6.0 max	2.2	1 day		
SO ₃ (%)	3.0 max	3.2	3 days	7.0	23.4
Ignition loss (%)	3.0 max	2.7	7 days	12.0	29.8
Na ₂ O (%)	^A	0.19	28 days	^A	
K ₂ O (%)	^A	0.50	Time of setting (minutes) (Vicat)		
Insoluble residue (%)	0.75 max	0.27	Initial Not less than	45	124
CO ₂ (%)	^A	1.5	Not more than	375	
Limestone (%)	5.0 max	3.5	Heat of hydration (kJ/kg)		
CaCO ₃ in limestone (%)	70 min	98	7 days	^B	300
Inorganic processing addition (ground, granulated blastfurnace slag)	5.0 max	3.0	Test Method C1038 Mortar Bar Expansion (%)	^D	0.010 ^E
Potential phase composition (%) ^C					
C ₃ S	^A	59			
C ₂ S	^A	11			
C ₃ A	8 max	5			
C ₄ AF	^A	10			
C ₄ AF + 2(C ₃ A)	^A	20			
C ₃ S + 4.75C ₃ A	100 max	83			

^A Not applicable.

^B Test result represents most recent value and is provided for information only.

^C Adjusted per **A1.6**.

^D Required only if percent SO₃ exceeds the limit in **Table 1**, in which case the Test Method **C1038** expansion shall not exceed 0.020 % at 14 days.

^E Test result for this production period not available. Most recent test result provided.

OPTIONAL REQUIREMENTS
ASTM C150 Tables 2 and 4

CHEMICAL			PHYSICAL		
Item	Spec. Limit	Test Result	Item	Spec. Limit	Test Result
Equivalent alkalies (%)	^F	0.52	False set (%)	50 min	82
			Compressive strength (MPa)		
			28 days	28.0 min	^G

^F Limit not specified by purchaser. Test result provided for information only.

^G Test result for this production period not yet available.

We certify that the above described cement, at the time of shipment, meets the chemical and physical requirements of the ASTM C150 – XX or (other) _____ specification.

Signature: _____

Title: _____

FIG. X1.1 Example Mill Test Report



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ABC Portland Cement Company
Qualitytown, N.J.
Cement Type II

Plant: Example

Date March 9, 20xx

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Additional Data

Inorganic Processing Addition Data	
Type	Ground, granulated blast furnace slag
Amount (%)	3.0
SiO ₂ (%)	33.1
Al ₂ O ₃ (%)	10.9
Fe ₂ O ₃ (%)	1.1
CaO (%)	44.4
SO ₃ (%)	0.2

Base Cement Phase Composition	
C ₃ S (%)	63
C ₂ S (%)	12
C ₃ A (%)	5
C ₄ AF (%)	11

We certify that the above described data represents the materials used in the cement manufactured during the production period indicated.

Signature: _____

Title: _____

FIG. X1.2 Example Additional Data Report

SUMMARY OF CHANGES

Committee C01 has identified the location of selected changes to this standard since the last issue (C150/C150M - 11) that may impact the use of this standard. (Approved April 15, 2012)

(1) Revised **Table 3** and **Table 4**.

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