

# CEMENT SAMPLE WORKSHEET

North Dakota Department of Transportation, Materials & Research  
SFN 9994 (7-2017)

To be Filled in by Field Personnel	
Project Number	PCN
District	Engineer
Contractor	Submitted By
Date Sampled	Sample From
Brand & Type	
Amount Represented	Field Sample Number

For Materials & Research Central Lab Use Only			
Laboratory Number		Date Received	
No. .325 Sieve		AASHTO T-192 Tested By:	
Normal Consistency		%	AASHTO T-129 Tested By:
Fineness, Blaine Fineness Meter Specific Surface,		m <sup>2</sup> /kg	AASHTO T-153 Tested By:
Soundness, Autoclave Expansion		%	AASHTO T-107 Tested By:
Air Content of Mortar		%	AASHTO T-137 Tested By:
Time of Setting-Gillmore Test		AASHTO T-154 Tested By:	
Initial Set		hr.	min.
Initial Set		hr.	min.
Compressive Strength - 50mm Cubes		AASHTO T-106 Tested By:	
		3 Day Break	PSI
		7 Day Break	PSI
		28 Day Break	PSI
Conformity to Specifications			
Remarks			
Testing Lab Supervisor		Date Report	

- \_\_\_\_\_ District
- Central Lab
- \_\_\_\_\_
- \_\_\_\_\_

Lab No. CE-	Date
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**NORMAL CONSISTENCY, TIME OF SET, AUTOCLAVE BAR**

N.C. = \_\_\_\_\_ %

START TIME	INITIAL SET TIME	FINAL SET TIME	INITIAL LENGTH	FINAL LENGTH	DIFFERENCE	% EXPANSION
: AM	: AM	: AM	10. "	10. "	0. "	0. %

AIR CONTENT:  $100 - 2.5W \frac{(182.7 + P)}{(5000 + 10P)} = \% \text{ air}$

P = % Water  
W=Wt of Mortar

$P = \frac{\text{ml of water}}{\text{grams of cement}} \times 100 = \frac{\text{_____}}{350} \times 100 = \text{_____} \% \text{ Water}$

\_\_\_\_\_ % Flow Obtained

W = Wt of measure & mortar - Wt of measure = Wt of mortar

W = \_\_\_\_\_ - 638.2 = \_\_\_\_\_ grams of mortar

2.5 x grams of mortar x factor from chart  
2.5 ( \_\_\_\_\_ x 0.0 \_\_\_\_\_ )

= 100 - \_\_\_\_\_ = \_\_\_\_\_ % Air Content

AIR PERMEABILITY: Specific Surface Cell #2

Time = \_\_\_\_\_ seconds

$S_s = \frac{3818 \times \text{_____}}{9.42} = \text{_____} \text{ cm}^2 / \text{gram or } \text{_____} \text{ m}^2/\text{kg}$

AIR PERMEABILITY: Specific Surface Cell #1

Time = \_\_\_\_\_ seconds

$S_s = \frac{3818 \times \text{_____}}{9.22} = \text{_____} \text{ cm}^2 / \text{gram or } \text{_____} \text{ m}^2/\text{kg}$

T - 192 .325 Screen # \_\_\_\_\_ Correction Factor \_\_\_\_\_ %

Residue X(100+CF) = Corrected Residue or % retained on screen  
100 - CR = % Passing

\_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_ CR or % retained on screen

100 - \_\_\_\_\_ = \_\_\_\_\_ % Passing