# CEMENT SAMPLE WORKSHEET

North Dakota Department of Transportation, Materials & Research Division

SFN 9994 (Rev. 01-2009)

| 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 | |
| Qualitative Acid Test For Fly Ash | | | AASHTO T-105.5 Tested By: |
| Normal Consistency | % | | AASHTO T-129 Tested By: |
| Fineness, Blaine Fineness Meter Specific Surface, | m2/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. |
| Final 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: | | | |

* Attention Advised

☐ _____ District

☐ Central Lab.

☐ _____

☐ _____

_____

Testing Lab Supervisor

Date Report _____

Lab No. CE-

Date:

## 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:

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

P = % Water

W = Wt of Mortar

P = $\frac{\text{ml of water}}{\text{grams of cement}}$ X100 = _____ x 100 = _____ % Water
350

_____% 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 ( _____ x0.0 _____ )

= 100 - _____ = _____ % Air Content

## AIR PERMEABILITY: Specific Surface Cell #2

Time = _____ seconds

Ss = $\frac{3818 \text{ x}}{\text{_____}}$
9.21

= _____ $cm^2$ /gram or _____ $m^2$ /kg

## AIR PERMEABILITY: Specific Surface Cell #1

Time = _____ seconds

Ss = $\frac{3818 \text{ x}}{\text{_____}}$
8.86

= _____ $cm^2$ /gram or _____ $m^2$ /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

Correction factor Screen #1 19.72 % Screen #2 4.64 %