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Cement Mill Certificate of Analysis

Alaska Basic Industries hereby certify that cement represented by this analysis complies with the current requirements for Type I and Type II of ASTM C150-11 specifications, and AASHTO M85-11.

General Information

Portland Cement: Type I/II Low Alkali

Date Shipped: April 30, 2018

Meets: ASTM C150-11

AASHTO M85-11

Lot # / Ship: Jamaica Bay #043018

Chemical Composition:

	<u>Results</u>	<u>Type I Requirements</u>	<u>Type II Requirements</u>
Silicon Dioxide (SiO ₂):	20.1%	---	---
Aluminum Oxide (Al ₂ O ₃):% Max	4.4%	---	6.00%
Ferric Oxide (Fe ₂ O ₃):% Max	3.3%	---	6.00%
Calcium Oxide (CaO):	63.0%	---	---
Magnesium Oxide (MgO):% Max	3.4%	6.00%	6.00%
Sulfur Trioxide (SO ₃):% Max	2.8%	3.00%	3.00%
Loss On Ignition: % Max	1.7%	3.00%	3.00%
Insoluble Residue: % Max	0.23%	0.75%	0.75%
Tricalcium Silicate (C ₃ S):	59.3	---	---
Dicalcium Silicate (C ₂ S):	12.3	---	---
Tricalcium Aluminate (C ₃ A):% Max	6.0%	---	---
Tetracalcium Aluminoferrite (C ₄ AF):	10.1	---	---
Total Alkali as NaEq: % Max	0.58%	0.60%	0.60%
Limestone, 5 % max	1.9%	5.00%	5.00%
CaCO ₃ in Limestone, 70% min	86%	70%	70%

Physical Properties:

Blaine (min ² /kg.):	389	260	260
Vicat, Initial Set (mins.):	140	---	---
Vicat, Final Set (mins.):	295	45-375	45-375
Autoclave Expansion:% Max	0.08%	0.80%	0.80%
False Set:	87%	---	---
Air Content (% Max by vol.):	5.40%	12.00%	12.00%

Mortar Cube Breaks:

Compressive Strength (PSI):	1 Day	3 Days	7 Days		
	1920	3769	4895	---	---
				1740 min	1740 min
				2760 min	2760 min

Notes

1. **Test Results:** This mill test represents typical data.
2. The percent of Limestone is slowly being increased, which has no effect on the performance of concrete
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Patrick Walter

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Type I/II

Terminals in
 Anchorage · Fairbanks