



## Material Certification Report

Brand: Skyway Cement  
 Material: Slag Cement  
 Grade: 100  
 Date Range: September 1-30, 2021  
 Lot Number: Multiple Lots

### Certification

This cement meets the requirements of ASTM C989 and AASHTO M302 specifications for Grade 100 slag cement.

### General Information

Supplier:	Skyway Cement Company LLC.	Source Location:	Skyway Cement Company LLC.
Address:	3020 East 103rd Street Chicago, IL 60617		3020 East 103rd Street Chicago, IL 60617
Telephone:	(872)302-5910	Contact:	Roberto Carrillo
Date Issued:	13-Oct-2021		

The following information is based on average test data during the test period.  
 The data is typical of slag cement shipped by Skyway Cement Company LLC.; individual shipments may vary.

### Test Data on ASTM Standard Requirements

Chemical			Physical		
Item	Limit <sup>A</sup>	Result	Item	Limit <sup>A</sup>	Result
Sulfide S (%)	2.5 max	0.99	+45 µm (No. 325) Sieve (%)	20 max	0.31
Sulfate Ion - SO <sub>3</sub> (%)	-	0.00	Blaine Fineness (m <sup>2</sup> /kg)	-	556
Aluminum Oxide (%)	-	8.99	Air Content (%)	12 max	5.39
Chloride - CL (%)	-	0.11	Slag Activity Index (%)		
Total Alkalies as Na <sub>2</sub> O (%)	-	0.57	Avg 7 Day Index	-	82
			Avg 28 Day Index	95 min	113
			Compressive Strength - MPa (psi):		
			Slag + Reference Cement		
			7 Day	-	23 (3397)
			28 Day	-	40 (5911)
			Reference Cement <sup>B</sup>		
			7 Day	-	28 (4167)
			28 Day	-	36 (5274)

### Reference Cement Qualification Data

Chemical			Physical		
Item	Limit <sup>A</sup>	Result	Item	Limit <sup>A</sup>	Result
Total Alkalies as Na <sub>2</sub> O (%)	0.60 - 0.90	0.78	Blaine Fineness (m <sup>2</sup> /kg)	-	335
C <sub>3</sub> S	-	49.1	Compressive Strength - MPa (psi):		
C <sub>2</sub> S	-	24.0	7 Day	-	28 (4111)
C <sub>3</sub> A	-	10.0	28 Day	34.5 (5000) min	36 (5348)
C <sub>4</sub> AF	-	7.2			

### Notes

<sup>A</sup>Dashes in the limits columns means Not Applicable

<sup>B</sup>Reference cement results from procedure "Preparation of Specimens". Information on Reference Cement qualification available upon request.

Specific Gravity: 2.89

This data may have been reported on previous mill certificates. It is typical of the cement being currently shipped which was produced in September of 2021.

Quality Manager