

INDOT-#73

Class A - ACBF AGGREGATE Plant No. 2473 CAPP NO. Q 082244

General Description

Beemsterboer Aggregates provides light weight ACBF (Air Cooled Blast Furnace) aggregates; a nonmetallic coproduct from iron manufacturing. It consists primarily of silicates, aluminosilicates, and calcium-alumina-silicates.

Technical Properties

Method	Test	Result	Specification
Sieve Analysis (AASHTO T 27)	<i>Sieve Size</i>	<i>Percent Passing</i>	<i>IN-73</i>
	1"	100.0	100
	3/4"	94.6	90-100
	1/2"	68.8	60-90
	No. 4	53.8	35-60
	No. 30	20.2	12-30
	No. 200	5.5	5-12
Wash -No. 200 Sieve (AASHTO T11)	Decant	4.5	-
Moisture (AASHTO T 255)	Moisture	3.80%	N/A
Freeze Thaw (AASHTO T 103)	Freeze Thaw	1.6%	12% Max.
Unit Weights (AASHTO T 19)	<i>Rodded Unit Weights</i>		
	lbs/ft ³	104	Min. 70 lbs/ft ³
	lbs/yrd ³	2,808	
	ton/yrd³	1.404	
Standard Proctor (AASHTO T 99)	Optimum Moisture	9.8%	N/A
	Max. Dry Density	113.3 lbs/ft ³	N/A
	Max. Wet Density	124.9 lbs/ft ³	N/A

All data is based on material averages and are in compliance with INDOT Standards. Actual production runs may vary.



South Shore Plant

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General Product Information

Environmental

ITM 212-15T Approval- IDEM Code IC 13-19-3-8 Section 8 States: The board **may not** adopt rules under section 1 of this chapter to **regulate** the following activities involving the legitimate use of **slag generated by the production of iron or steel** under Bureau of the Census Standard Industrial Classification 3312: *As added by P.L.257-2001, SEC.1.Indiana Code 2015.*

Analyses	Certs	AT	Result	RL	Qual	Units	DF
Method: 1311/7470A							
TCLP Mercury by CVAA Prep Method: SW-846 1311/SW-846 7470							
Mercury	dil	A	ND	0.0010		mg/L	1
Method: 1311/6010C							
TCLP Metals by ICP Prep Method: SW-846 1311/SW846 3005A							
Arsenic	dil	A	ND	0.0100		mg/L	1
Barium	dil	A	ND	0.500		mg/L	1
Cadmium	dil	A	ND	0.00200		mg/L	1
Chromium	dil	A	ND	0.00300		mg/L	1
Lead	dil	A	ND	0.00750		mg/L	1
Selenium	dil	A	ND	0.0300		mg/L	1
Silver	dil	A	ND	0.0100		mg/L	1

General

Product Facts

- All material is tested in accordance with **INDOT Leachate Test Method ITM 212.**
 - Minimizes potential of **NON-HAZARDOUS** run off discoloration and sulfur odor.
- ACBF Aggregates are **INERT (NON-EXPANSIVE).**
 - ACBF Aggregates are EXEMPT from ASTM Test Method D-4792 (expansion).
- ACBF Aggregates are **Alkaline** with a PH in excess of 8.0.
 - Alkaline materials **DO NOT** contribute to **Corrosion.**
- ACBF Aggregates can yield up to **20% more per CY than natural aggregates!**
- 100% Acceptance equivalent or better than natural aggregates.**
 - INDOT (Indiana Department of Transportation)
 - IDOT (Illinois Department of Transportation)
 - AASHTO (American Association of Highway and Transportation Officials)
 - ASTM (American Society for Testing and Materials)
 - FHWA (United States Federal Highway Administration)
 - FAA (United States Federal Aviation Administration)

Applications

ACBF Approved Uses

*(100% Replacement for limestone)

Base/Sub-Base Aggregates	Drainage	Cement Mfg. Raw Feed	Hot Mix Asphalt
Lightweight Fill	Gabions/Rip Rap	Roller Compacted Concrete	Chip and Seal Asphalt
Railroad Ballast	Roof Aggregate	Pre-Cast Concrete Aggregates	Insulation Manufacturing
MSE Wall Backfill	Erosion Control	Concrete Block	Glass Manufacturing
Pipe Bedding and Backfill	Snow and Ice Control	PCC	Agriculture/Soil Amendment

Chemical

Typical Chemistry

Chemical Compound	Normalized Results %
Sodium Oxide (Na2O)	0.30
Magnesium Oxide (MgO)	10.84
Aluminum Oxide (Al2O3)	7.57
Silicon Dioxide (SiO2)	37.07
Phosphorus Pentoxide (P2O5)	0.10
Sulfur Trioxide (SO3)	2.48
Potassium Oxide (K2O)	0.34
Calcium Oxide (CaO)	38.65
Titanium Dioxide (TiO2)	0.44
Chromium(III) Oxide (Cr2O3)	0.00
Manganese Oxide (MnO)	0.66
Iron (III) Oxide (Fe2O3)	0.56
Zinc Oxide (ZnO)	-0.0001
Vanadium (V2O5)	0.01
Sulfur (S)	1.02
Loss on Ignition % (L.O.I.)	-0.7



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