

INDOT- # 11

Class AP - 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-11</i>
	1/2"	100	100
	3/8"	83.2	75-95
	No. 4	18.1	10-30
	No. 8	7.3	0-10
Wash -No. 200 Sieve (AASHTO T11)	Decant	1.9	0-2.5
Moisture (AASHTO T 255)	Moisture	2.50%	N/A
Freeze Thaw (AASHTO T 103)	Freeze Thaw	1.3%	12% Max.
Unit Weights (AASHTO T 19)	<i>Rodded Unit Weights</i>		
	lbs/ft ³	82	Min. 70 lbs/ft ³
	lbs/yd ³	2,214	
	ton/yd³	1.107	
Absorption & Specific Gravity (AASHTO T 85)	Bulk Specific Gravity	2.430	N/A
	Absorption	2.80%	N/A

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



South Shore Plant

1 N. Buchanan St. Gary, IN, 46402 | Sales and Dispatch: (219) 931-7462
Info@beemslag.com

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 (Na ₂ O)	0.30
Magnesium Oxide (MgO)	10.84
Aluminum Oxide (Al ₂ O ₃)	7.57
Silicon Dioxide (SiO ₂)	37.07
Phosphorus Pentoxide (P ₂ O ₅)	0.10
Sulfur Trioxide (SO ₃)	2.48
Potassium Oxide (K ₂ O)	0.34
Calcium Oxide (CaO)	38.65
Titanium Dioxide (TiO ₂)	0.44
Chromium(III) Oxide (Cr ₂ O ₃)	0.00
Manganese Oxide (MnO)	0.66
Iron (III) Oxide (Fe ₂ O ₃)	0.56
Zinc Oxide (ZnO)	-0.0001
Vanadium (V ₂ O ₅)	0.01
Sulfur (S)	1.02
Loss on Ignition % (L.O.I.)	-0.7



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