

Material and Application Guide

22X Steel Furnace Slag – Levy Plant #3



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Material: Steel Furnace Slag

Product: 22X – Wayne County

Location: Levy Plant #3 – State Pit #82-21

Applications: Road shoulder material
Surfacing for unpaved driveways, roads and parking lots

Description: A dense graded base aggregate, produced by crushing and screening Steel Furnace Slag. A light gray to black aggregate formed simultaneously with the production of steel in a steel furnace. The particles are sized from 1" (25.0mm) to zero (dust).



22X Steel Furnace Slag – Actual size shown

Specifications: Wayne County Department of Public Services

22X Steel Furnace Slag conforms to all the requirements of Wayne County Department of Public Services, specifications for 22X Coarse Aggregate

Gradation:

| | | | | | | | | | | | |
|---------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-------------|-------------|-------------|------------|
| U.S. Sieve | 1" | ¾ " | ½" | ⅜" | #4 | #8 | #16 | #30 | #50 | #100 | #200 |
| Metric Sieve | 25.0mm | 19.0mm | 12.5mm | 9.5mm | 4.75mm | 2.36mm | 1.18mm | 600 μ m | 300 μ m | 150 μ m | 75 μ m |
| Specification | 100 | 90-100 | - | 60-90 | - | 20-50 | - | - | - | - | - |
| 2008 Average | 100 | 100 | 98 | 88 | 64 | 47 | 35 | 29 | 24 | 20 | 13 |

Physical Properties:

- Loss By Washing (2008 Average) – 12% (Specification 3% – 13%)
- ASTM C 29, Loose Unit Weight (Average of last 10 tests) – 120 lb/ft³
- ASTM C 29, Rodded Unit Weight (Average of last 10 tests) – 133 lb/ft³

General Usage Guide:

The 22X Steel Furnace Slag should be placed 6" to 18" thick, depending upon ground conditions and design loadings, in lifts not exceeding 8". Prior to the placement of any base material, the grade should be compacted and trimmed to the design density & elevations and be free of any standing water and not in a frozen condition. Base material should be compacted at optimum moisture content (approximately 8% to 10%) to 95% to 100% relative density or to the compaction level as specified in the design plans.

Field Estimating Quantities (Compacted in Place):

| | 100 sq. yd. | 200 sq. yd. | 500 sq. yd. | 1,000 sq. yd. | 2,000 sq. yd. | 5,000 sq. yd. |
|----------|----------------|----------------|----------------|------------------|------------------|------------------|
| 6" Deep | 37 tons | 73 tons | 183 tons | 367 tons | 733 tons | 1,833 tons |
| 8" Deep | 49 tons | 98 tons | 244 tons | 489 tons | 978 tons | 2,444 tons |
| 10" Deep | 61 tons | 122 tons | 306 tons | 611 tons | 1,222 tons | 3,056 tons |
| 12" Deep | 73 tons | 147 tons | 367 tons | 733 tons | 1,467 tons | 3,667 tons |

PLEASE NOTE THAT STEEL FURNACE SLAG IS NOT TO BE USED IN ANY CONFINED APPLICATIONS, SUCH AS BASE COURSES UNDER PAVEMENTS OR STRUCTURES OR AS AN AGGREGATE IN PORTLAND CEMENT CONCRETE

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