

# Material and Application Guide

## Class II Natural Sand – AAOM Ray Road



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**Material:** Natural Sand

**Product:** MDOT – Class II

**Location:** American Aggregate, Ray Road Plant – State Pit #63-115

**Applications:** Granular material for subgrade improvement  
Granular blankets  
Underdrain backfill  
Pipe bedding and backfill  
General fill

**Description:** A graded fine aggregate, produced by screening natural sand, a yellow to light brown material formed by the natural abrasion and disintegration of rocks by glacial or riverbed action. The particles can be sized from 3" (75.0mm) to zero (dust), but are typically sized ¾" (19.0mm) to zero (dust).



**Class II Natural Sand – Actual size shown**

## Specifications: Michigan Department of Transportation

Class II Natural Sand conforms to all the requirements of Michigan Department of Transportation "2003 Standard Specifications for Construction", section 902 "Aggregates"

## Gradation:

U.S. Sieve	Metric Sieve	Specification	2008 Average
3"	75.0 mm	100	<b>100</b>
2"	50.0 mm	-	<b>100</b>
1½"	37.5 mm	-	<b>100</b>
1"	25.0 mm	60-100	<b>96</b>
¾"	19.0 mm	-	<b>92</b>
½"	12.5 mm	-	<b>86</b>
⅜"	9.5 mm	-	<b>83</b>
# 4	4.75 mm	-	<b>74</b>
# 8	2.36 mm	-	<b>64</b>
# 16	1.18 mm	-	<b>56</b>
# 30	600 µm	-	<b>46</b>
# 50	300 µm	-	<b>29</b>
# 100	150 µm	0-30	<b>14</b>
# 200	75 µm	-	<b>8</b>
LBW		0-7	<b>7</b>

## Physical Properties:

- ASTM C 29, Loose Unit Weight (2008 Average) – 101 lb/ft<sup>3</sup>
- ASTM C 29, Rodded Unit Weight (2008 Average) – 111 lb/ft<sup>3</sup>

## General Usage Guide:

The Class II Natural Sand should be placed as required depending upon ground conditions and design loadings, in lifts not exceeding 8". Prior to the placement of any 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. The Class II sand should be compacted at optimum moisture content to 95% to 100% relative density or to the compaction level as specified in the design plans.

## Fill 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.	10,000 sq. yd.
6" Deep	25 tons	50 tons	175 tons	250 tons	500 tons	1,250 tons	2,500 tons
8" Deep	33 tons	67 tons	167 tons	333 tons	667 tons	1,667 tons	3,333 tons
10" Deep	42 tons	83 tons	208 tons	417 tons	833 tons	2,083 tons	4,667 tons
12" Deep	50 tons	100 tons	250 tons	500 tons	1,000 tons	2,500 tons	5,000 tons
18" Deep	75 tons	150 tons	375 tons	750 tons	1,500 tons	3,750 tons	7,500 tons

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