

# MATERIAL SPECIFICATION

## **521. Aggregates for Drainfill and Filters**

### **1. Scope**

This specification covers the quality of mineral aggregates for the construction of drainfill and filters.

### **2. Quality**

Drainfill and filter aggregates shall be sand, gravel or crushed stone or mixtures thereof. Aggregates shall be composed of clean, hard, durable mineral particles free from organic matter, clay balls, soft particles or other substances that would interfere with the free-draining properties of the aggregates.

Coarse aggregate may be crushed limestone or other materials with limestone particles included. Aggregates from crushed limestone shall be thoroughly washed and screened to remove limestone dust, limestone fines, and fine soil particles. For coarse aggregate containing limestone, the total portion finer than the No. 4 sieve shall not contain more than three (3) percent by weight of limestone. Limestone shall not be used for fine aggregates except in combination with other materials such that not more than five (5) percent of the portion finer than the No. 4 sieve shall be limestone.

Aggregates shall be tested for soundness according to ASTM Method C 88, and shall have a weighted average loss in five (5) cycles of not more than twelve (12) percent when sodium sulfate is used or eighteen (18) percent when magnesium sulfate is used.

### **3. Grading**

Drainfill and filter aggregates shall conform to the specified grading limits after being placed or after being compacted when compaction is specified. Grading shall be determined by ASTM Method C 136. The percentage of material finer than the No. 200 sieve shall be determined by the method in ASTM Designation C 117.

#### **4. Storing and Handling**

Drainfill and filter aggregates shall be stored and handled by methods that prevent segregation of particle sizes or contamination by mixing with other materials.