

TABLE 1
Physical Property Requirements for Clear Stone

| Laboratory Test | MTO Test Number | Nominal Maximum Size | | |
|--|-----------------|----------------------|--------------|---|
| | | 53 mm | 19 mm Type 1 | 19 mm Type II, 16 mm, 13.2 mm, and 9.5 mm |
| Loss by Washing, Pass 75 µm Sieve, % maximum | LS-601 | 2.0 | 2.0 | 2.0 |
| Crushed particles, % minimum | LS-607 | - | 50 | 60 |
| Micro-Deval Abrasion Loss, coarse aggregate, % maximum | LS-618 | 25 | 25 | 25 |

TABLE 2
Gradation Requirements for Clear Stone

| Sieve Size | Gradation (LS-602), Percent Passing | | | | | |
|------------|-------------------------------------|----------|----------|----------|----------|----------|
| | Nominal Maximum Size | | | | | |
| | 53 mm | 19 mm | | 16 mm | 13.2 mm | 9.5 mm |
| Type I | | Type II | | | | |
| 63 mm | 100 | - | - | - | - | - |
| 53 mm | 90 - 100 | - | - | - | - | - |
| 26.5 mm | - | 100 | 100 | - | - | - |
| 19.0 mm | 0 - 15 | 90 - 100 | 90 - 100 | 100 | - | - |
| 16.0 mm | - | - | 65 - 90 | 96 - 100 | 100 | - |
| 13.2 mm | - | - | - | 67 - 86 | 96 - 100 | 100 |
| 9.5 mm | - | 0 - 55 | 20 - 55 | 29 - 52 | 50 - 73 | 95 - 100 |
| 6.7 mm | - | - | - | - | - | 20 - 45 |
| 4.75 mm | - | 0 - 10 | 0 - 10 | 0 - 10 | 0 - 10 | 0 - 10 |
| 75 µm | 0 - 2.0 | 0 - 2.0 | 0 - 2.0 | 0 - 2.0 | 0 - 2.0 | 0 - 2.0 |

TABLE 3
Physical Property Requirements for Granular C, Granular D, and Granular Sheeting

| Laboratory Test | MTO Test Number | Granular D | Granular C | Granular Sheeting |
|---|------------------|------------|------------|-------------------|
| Petrographic Requirement, fine aggregate | LS-616 LS-709 | (Note 1) | | |
| Micro-Deval Abrasion Loss, coarse aggregate, % maximum (Note 2) | LS-618 | 30 | | |
| Micro-Deval Abrasion Loss, fine aggregate, % maximum | LS-619 | 35 | | |
| Plasticity Index (PI), maximum | LS-704 | 0 | | |
| Notes: | | | | |
| <p>1. For materials north of the French/Mattawa Rivers only: for materials with > 5.0% passing the 75 µm sieve, the amount of mica retained on the 75 µm sieve, passing the 150 µm sieve, shall not exceed 10% of the material on that sieve, unless testing according to LS-709 determines permeability values > 1.0 x 10⁻⁴ cm/s or field experience show satisfactory performance. Prior data demonstrating compliance with this requirement shall be acceptable, provided such testing has been done within the past five years and field performance has been satisfactory.</p> <p>2. The requirement for the coarse aggregate Micro-Deval abrasion loss test shall be waived if the material has more than 80% passing the 4.75 mm sieve.</p> | | | | |

TABLE 4
Gradation Requirements for Granular C, Granular D, and Granular Sheeting

| Sieve Size | Gradation (LS-602), Percent Passing | | |
|------------|-------------------------------------|------------|-------------------|
| | Granular C | Granular D | Granular Sheeting |
| 150 mm | 100 | - | 100 |
| 26.5 mm | 50 - 100 | - | 50 - 100 |
| 13.2 mm | - | - | 35 - 100 |
| 9.5 mm | - | 100 | - |
| 4.75 mm | 20 - 100 | 50 - 100 | 20 - 80 |
| 1.18 mm | 10 - 100 | 20 - 55 | 10 - 50 |
| 300 µm | 5 - 90 | 10 - 30 | 5 - 25 |
| 150 µm | 4 - 30 | - | 0 - 15 |
| 75 µm | 0 - 10.0 | 0 - 12.0 | 0 - 8.0 |

TABLE 5
Gradation Requirements for Gabion Stone and Rip-Rap

| Mass kg | Approximate Dimension Mm | Gradation, percent less than mass specified | | | |
|------------|--------------------------------|---|----------|---------|---------|
| | | Gabion Stone | | Rip-Rap | |
| | | G-3 | G-10 | R-10 | R-50 |
| 75 | 305 | - | - | - | 100 |
| 50 | 265 | - | - | - | 70 - 90 |
| 25 | 210 | - | - | - | 40 - 55 |
| 15 | 180 | - | 100 | 100 | - |
| 10 | 155 | - | 90 - 100 | 70 - 90 | - |
| 5 | 125 | 100 | - | 40 - 55 | - |
| 3 | 105 | 90 - 100 | - | - | - |
| 2.5 | 100 | - | 0 - 5 | - | 0 - 15 |
| 0.5 | 60 | 0 - 5 | - | 0 - 15 | - |

Notes:

A. Masses are based on approximate size of an equivalent cube with a specific gravity of 2.65 and are provided for estimating purposes only. Gradation is determined by weighing individual stone particles in the field or laboratory.

TABLE 6
Physical Property Requirements for Truck Arrester Bed Aggregate

| Laboratory Test | MTO Test Number | Truck Arrester Bed Aggregate |
|--|-----------------|------------------------------|
| Loss by Washing, Pass 75 µm Sieve, % maximum | LS-601 | 1.0 |
| Absorption, % maximum | LS-604 | 2.0 |
| Freeze-Thaw Loss, % maximum | LS-614 | 6 |
| Micro-Deval Abrasion Loss, coarse aggregate, % maximum | LS-618 | 21 |

TABLE 7
Gradation Requirements for Truck Arrester Bed Aggregate

| Sieve Size | Gradation (LS-602), Percent Passing |
|-------------------|--|
| 37.5 mm | 100 |
| 26.5 mm | 90 - 100 |
| 19.0 mm | 0 - 10 |

TABLE 8
Gradation Requirements for Mortar Sand

| Sieve Size | Gradation (LS-602), Percent Passing |
|-------------------|--|
| 4.75 mm | 100.0 |
| 2.36 mm | 95 - 100 |
| 1.18 mm | 60 - 100 |
| 600 µm | 35 - 80 |
| 300 µm | 15 - 50 |
| 150 µm | 2 - 15 |
| 75 µm | 0 - 5.0 |

**TABLE 9
Gradation Requirements for Winter Sand**

| Sieve Size | Gradation (LS-602), Percent Passing |
|------------|-------------------------------------|
| 9.5 mm | 100.0 (Note 1) |
| 6.7 mm | 97 - 100 |
| 4.75 mm | 90 - 100 |
| 2.36 mm | 50 - 95 |
| 1.18 mm | 20 - 90 |
| 600 µm | 0 - 70 |
| 300 µm | 0 - 35 |
| 150 µm | 0 - 15 |
| 75 µm | 0 - 5.0 |

Notes:

1. In addition to LS-602, to be confirmed by visual inspection of the stockpile.

A. The minimum size of the test sample shall be 5 kg. Following oven drying, the sample shall be sieved on the 9.5 mm, 6.7 mm, and 4.75 mm sieves. Material passing the 4.75 mm sieve shall be split to an appropriate size according to LS-602 for subsequent washing and fine sieving. The final grading shall be calculated according to LS-602 as the percentage of material passing each sieve based on the total mass of the oven dried sample.