

TABLE 1
Gradation Requirements (LS-602) for Fine Aggregate

MTO Sieve Designation	Percent Passing
9.5 mm	100
4.75 mm	95 - 100
2.36 mm	80 - 100
1.18 mm	50 - 85
600 µm	25 - 60
300 µm	10 - 30
150 µm	0 - 10
75 µm	0 - 3 Natural Sand 0 - 6 Manufactured Sand
Note:	
Fine aggregate shall have no more than 45% passing any sieve and retained on the next consecutive sieve.	

TABLE 2
Physical Requirements for Fine Aggregate

Laboratory Test Name	MTO or CSA Lab Test Number	Acceptance Limit
Organic Impurities Test, Maximum organic plate number (Note 1)	LS-610	3
Micro-Deval Abrasion Test, % maximum loss	LS-619 or CSA A23.2-23A	20
Accelerated Mortar Bar Test, % maximum at 14 day (Notes 2, 3, and 4)	LS-620 or CSA A23.2-25A	0.150
Concrete Prism Expansion Test, % maximum at 1 year (Notes 2 and 5)	CSA A23.2-14A	0.040
Notes:		
<ol style="list-style-type: none"> 1. A fine aggregate failing this test may be approved if comparative mortar specimens prepared according to ASTM C 87 meet the following requirements: <ul style="list-style-type: none"> • Mortar specimens prepared using unwashed fine aggregate shall have a 7-day compressive strength that is a minimum of 95% of the strength of mortar specimens prepared using the same fine aggregate washed in a 3% sodium hydroxide solution. Type 10 normal Portland cement shall be used. • Setting time of the unwashed fine aggregate mortar specimens shall not differ from washed fine aggregate mortar specimens by more than 10%. 2. The need for data to demonstrate compliance with this requirement shall be waived by the Contract Administrator if the aggregate source is on the current Ministry of Transportation's regional Aggregate Sources List for Structural Concrete Fine and Coarse Aggregates. 3. An aggregate that fails this requirement may be accepted provided the requirements of CSA A23.2-14A are met. 4. Aggregates that contain more than 1.0% chert, measured by LS-616, that fails the 14 day requirement may be accepted provided the expansion after 28 days does not exceed 0.33%. 5. An aggregate need only meet this requirement if it fails the requirements of CSA A23.2-25A. Test data shall have been obtained within the past 18 months from aggregate that is from the same source and processed in the same manner as the material that is intended to be used. 		

TABLE 3
Gradation Requirements (LS-602) - Coarse Aggregate
for Structural Concrete, Sidewalks, Curb and Gutter

Nominal Maximum Size	19.0 mm	16.0 mm	13.2 mm	9.5 mm	6.7 mm
MTO Sieve Designation mm	Percent Passing				
26.5	100	-	-	-	-
19.0	85-100	100	100	-	-
16.0	65-90	96-100	-	-	-
13.2	-	67-86	90-100	100	100
9.5	20-55	29-52	40-70	85-100	-
6.7	-	-	-	-	75-100
4.75	0-10	0-10	0-15	10-30	40-80
2.36	-	-	-	0-10	0-20

TABLE 4
Gradation Requirements (LS-602) - Coarse Aggregate
for Concrete Pavement or Concrete Base

Nominal Maximum Size	37.5 mm	19.0 mm	Combined
MTO Sieve Designation mm	Percent Passing		
53.0	100	-	100
37.5	90-100	-	95-100
26.5	20-55	100	-
19.0	0-15	85-100	35-70
9.5	0-5	20-55	10-30
4.75	-	0-10	0-5