

MATERIALS SPECIFICATIONS

Sub 100 or GAP 100, Blue/Brown Rock

Blue/Brown Rock is a nonspecific rock aggregate intended for use as a shape correction or subgrade improvement layer below the designed pavement.

The minimum requirements are:

- 98% of the material shall be less than 100mm maximum size with greater than 15% passing a 1.18mm sieve.
- The minimum crushing resistance shall be 80kN (NZS 4407:1991: test 3.10)
- 10% of the dry mass shall be unweathered (Blue) stone
- A minimum soaked CBR Strength of 20 (NZS 4407:1991: test 3.15)

Depending on the properties of the material proposed the Engineer at his discretion may approve Blue/Brown material for use as a lower Sub-base layer.

GAP 65 Aggregate

GAP 65 aggregate shall comprise crushed aggregate and be free from all non-mineral matter with the following requirements:

- Crushing resistance minimum 90kN (NZS 4407:1991: test 3.10)
- A minimum soaked CBR Strength of 40 (NZS 4407:1991: test 3.15)
- Grading (NZS 4407:1991: test 3.8.1)

GAP 65 Subbase AGGREGATE Limits		
Sieve size (mm)	% Passing	
63.00	100	
19.00	40	65
0.30	0	10

GAP 40 Base Course Pavement Aggregate

The Base Course Pavement material shall comply with the following requirements:

- Crushing resistance 120kN (NZS 4407:1991: test 3.10)
- Plasticity Index Range 5 – 10 (NZS 4407:1991: test 3.4)
- A maximum Clay Index of 6 (NZS 4407:1991: test 3.5)
- Grading (NZS 4407:1991: test 3.8.1)

GAP 40 Pavement Aggregate Limits		
Sieve size (mm)	% Passing	
37.50	100	100
26.50	80	90
19.00	60	81
9.50	46	63
4.75	34	50
2.36	27	41
1.18	22	34
0.425	16	26
0.30	14	24
0.075	7	17

Note: Clay content is required to be regulated to produce the Plasticity Index of between 5 and 10, and a Liquid Limit of between 25 and 35.

AP 30 Wearing Course Aggregate

Wearing Course shall be a well graded crushed or screened aggregate that binds into a tightly compacted knitted mosaic surface under the action of rolling and complies with the following requirements:

- Shrinkage Product (SP) of between 100 and 365 (240 preferred)
- Grading Coefficient (GC) of between 16 and 34
- Grading (NZS 4407:1991: test 3.8.1)

AP 30 Wearing Course Limits		
Sieve size (mm)	% Passing	
37.50	100	
26.50	100	

19.00	90	100
9.50	65	90
4.75	55	85
2.36	40	70
0.425	25	45
0.075	10	25

Where; Shrinkage Product (SP) = Linear Shrinkage x % Passing 0.425mm and Grading Coefficient (GC) = (% passing 26.50mm - % passing 2.0mm) x % passing 4.75mm/100 (NZS 4402:1986: Test 2.6 Determination of the Linear Shrinkage)

Note: The New Zealand Standards for “Methods of Sampling and Testing Road Aggregates” (NZS 4407:1991) was reviewed and updated in 2015. NZS 4407:1991 will be superseded by NZS 4407:2015, this process is still in the transitional stage with the previous standards being phased out over time. We acknowledge there are new standards, but have quoted the older.