
SECTION 812 - CRUSHED ROCK FOR PAVEMENT BASE AND SUBBASE**812.01 DESCRIPTION**

This section covers the requirements of crushed rock and plant mixed wet-mix crushed rock for 20 mm nominal size Classes 1 and 2 base, 20 mm and 40 mm nominal size, Class 3 subbase and for Class 4 crushed rock subbase. The material class, pavement course use and nominal sizes shall be as specified in the special clauses and/or the drawings and/or the schedule.

Crushed rock products shall be supplied only from a VicRoads accredited source. Products shall be supplied as Plant Mixed Wet Mixed Crushed Rock (PMWMCR) if specified in Clause 812.05(c).

Source rock types from which crushed rock base and subbase can be produced are specified in Section 801 - Source Rock for the Production of Crushed Rock and Aggregates.

Requirements for crushed pyroclastic rocks (Scoria) are covered in Section 818 - Crushed Scoria for Pavement Base and Subbase.

Requirements for crushed concrete are covered in Section 820 - Crushed Concrete for Pavement Subbase and Light Duty Base.

Construction requirements for unbound flexible pavements incorporating crushed rock are covered in Section 304 - Construction of Unbound Flexible Pavements.

812.02 DEFINITIONS**Additive**

A durable VicRoads approved material (e.g. fine graded clayey sand and/or very fine clayey filler) that may be added to a crushed rock in small quantities to improve its workability and physical properties.

Aggregates

For the purposes of this specification, fine aggregate shall be the portion of the crushed rock mixture passing the 4.75 mm sieve and coarse aggregates shall be the portion of the crushed rock mixture retained on the 4.75 mm sieve.

Assigned Los Angeles Value

The assigned Los Angeles Value is a hardness rating derived from Los Angeles Value test results, which is assigned to each source by VicRoads on an annual basis as a part of the accreditation process. The value is assigned on the basis of test data obtained from testing products.

Crushed Brick

Crushed brick is a crushed material which principally consists of crushed fired brick but may contain also crushed concrete, aggregate and concrete paste. Mud brick or non fired brick is not included in this definition.

Crushed Rock

Crushed rock is composed of rock fragments produced by the crushing, scalping and screening of igneous, metamorphic or sedimentary source rock which conforms to the requirements of Section 801 – Source Rock for the Production of Crushed Rock and Aggregates, with or without additives, produced in a controlled manner to close tolerances for grading and plasticity.

For the purpose of this specification crushed rock is to be supplied in various in classes broadly defined as follows:

Class 1 is a premium cohesive pavement base material for unbound pavements where a very high standard of surface preparation for a sprayed sealed or thin asphalt surfacing is required. It has a minimum plasticity index requirement and may have additional requirement for maximum permeability when used for heavy duty unbound pavements.

Class 2 is a high quality pavement base material for unbound flexible pavements in locations where a very high standard of surface preparation may not be required. Class 2 crushed rock does not have a minimum plasticity index or a maximum permeability requirement.

Class 3 is a high quality upper subbase material for heavy duty unbound flexible pavements. It may have a minimum permeability requirement to provide positive drainage to the sub-surface drains. Where specified, Class 3 may be used as base for lightly trafficked pavements provided the material produces sufficient cohesive fines during compaction.

Class 4 is a lower subbase material for heavy duty pavements or a subbase material for most other types of pavements. It may have a maximum permeability requirement.

Plant Mixed Wet-Mix Crushed Rock (PMWMCR)

Plant mixed wet-mix crushed rock is a mixture of crushed rock and water, produced at a controlled mixing plant to close tolerances of grading and moisture content based on the modified optimum moisture content of the material.

812.03 SOURCE ROCK

Source rock shall comply with the requirements of Section 801 - Source Rock for the Production of Crushed Rock and Aggregates.

Material from a quarry or non-quarry site shall not be used until the source has been investigated and accredited in accordance with VicRoads Code of Practice for Source Rock Investigations as listed in Section 175.

The Superintendent's approval must be obtained prior to changing the source of material.

812.04 COMPONENTS

(a) Coarse Aggregates

Coarse aggregates shall consist of clean, hard, durable, angular rock fragments of uniform quality complying with unsound and marginal rock requirements specified in Table 812.052.

(b) Fine Aggregates

Fine aggregates shall consist of clean, hard, durable, angular rock fragments and quarry fines of uniform quality.

All fine aggregates will be accepted as sound if produced from the same bench and location within the source as the coarse aggregates such that on any day, the quality of the fine aggregates are represented by the Unsound and Marginal Rock Content tests undertaken on the coarse aggregates.

If all or part of the fine aggregates are produced from a different bench or location within the source to that of the coarse aggregates, such that on any day are not represented by the Unsound and Marginal Rock Content tests undertaken on the coarse aggregates or are separately added into the manufacturing process, the combined fraction of fine aggregates shall be tested for Degradation Factor – Fine Aggregate as listed in Section 175, at the frequency specified in Table 812.131. The Degradation Factor – Fine Aggregate of a sample of the combined fine aggregates prior to mixing in of any additives, shall not be less than 60.

If all or part of the fine aggregates is to be imported from a different source or manufactured from a different rock type to that of the coarse aggregates, the Contractor shall first obtain approval of the Superintendent. The Contractor shall provide details of the exact location of the source and nature of the fine aggregates and the proposed percentage by mass to be added to the crushed rock mixture. If approved, all imported fine aggregates produced from igneous and metamorphic rock sources shall have a Degradation Factor – Fine Aggregate of not less than 60.

(c) Additives

Additives which are non durable or subject to appreciable breakdown will not be permitted.

The addition of any additive shall be subject to a registration process in accordance with VicRoads Code of Practice for Registration of Crushed Rock Mix Designs as listed in Section 175.

The total amount of any additive shall not exceed 15% of total dry mass of the crushed rock product unless otherwise specified. If clayey filler is used as all or part of the total additive, the total amount of clayey filler additive shall not exceed 2% of the total dry mass of the crushed rock product.

The addition of crushed brick to Class 3 or Class 4 subbase may be approved as a part of a VicRoads registered crushed rock mix design.

Crushed brick added to Class 3 subbase shall not exceed 15% and not exceed 50% in the case of a Class 4 subbase.

Crushed brick prior to addition to any crushed rock product shall have a wet strength not less than 100 kN and a wet/dry strength variation not greater than 35 when tested in accordance with the current Australian Standard – Wet/Dry Strength Variation as listed in Section 175.

Additive shall be:

- (i) in the case of clayey sands and clayey filler, supplied and/or processed to conform to the grading and plasticity requirements specified in Table 812.041;
- (ii) non-cementitious in nature except for lime added under the provision of Clause 812.05(d);
- (iii) free of vegetable matter;
- (iv) screened if necessary to remove all oversize particles, lumps and balls of clay or particles exceeding 4 mm in a clayey filler;
- (v) stored and maintained in a dry and free flowing state and added to the crushed rock as a separate component at any stage after completion of primary crushing;
- (vi) distributed into the crushed rock by a method that is capable of verifying that the pre-determined distribution rate has been achieved;
- (vii) uniformly mixed through the crushed rock by use of a pug mill.

Table 812.041 – Grading and Plasticity Requirements for Clayey Sand or Clayey Filler Additives

AS Sieve Size (mm)	Clayey Sand % Passing by mass	Clayey Filler % Passing by mass
9.5	100	100
4.75	90 - 100	100
2.36	75 - 95	95 - 100
0.425	45 - 65	70 - 100
0.075	30 - 50	50 - 100
Plasticity Index Range	10 - 20	30 - 55
Emerson Class No. (max)	No Requirement	6

(d) Blending of Products Containing Coarse Aggregates

Two or more crushed products containing coarse aggregates from different sources or rock types shall not be combined together. Any proposal to blend products containing coarse aggregates from different sources or rock types shall be registered as a crushed rock mix and clearly state the proportions by mass retained on each sieve for each rock type that will be used in the blend.

Blending of products containing coarse aggregates shall be subject to the following conditions:

- (i) all rock types in the blend shall individually comply with the relevant requirements of Section 801 and unsound and marginal rock content requirements specified in Table 812.052 for the combined blend;
- (ii) all material to be blended shall be fully crushed and screened to the maximum aggregate size permitted in the product prior to blending;
- (iii) all fine aggregates in the blend shall comply with the relevant requirements of Clause 812.04(b);
- (iv) if the blend has not been subjected to field placement and compaction, the Contractor shall prove that the material is capable of consistently meeting all requirements of this specification;
- (v) once a suitable blend has been developed and registered, the total proportions by mass of each rock type in the blend shall not be varied by more than plus or minus 5% by mass.

812.05 PRODUCT

- (a) Crushed rock in stockpile shall be free from vegetable matter and lumps or balls of clay and shall comply with the relevant test requirements of Table 812.051.

Table 812.051 - Test Requirements

Test	Test Value			
	Class 1	Class 2	Class 3	Class 4
Liquid Limit % (max)	30	30	35	40
Plasticity Index (range)	2 - 6 (+)	0 - 6	0 - 10	0 - 20
California Bearing Ratio (%) (min) (++)	-	-	-	20
Flakiness Index (%) (max)	35	35	-	-
PI x % passing 0.425 mm sieve (max)	-	-	-	450
Crushed Particles (%) (min) (+++)	60	60	50	-
Permeability (m/sec) (++++)	5×10^{-8} m/sec (max)	5×10^{-8} m/sec (max)	2.5×10^{-7} m/sec (max)	1×10^{-9} m/sec (max)
(+)	Unless otherwise advised as a part of the crushed rock mix design registration process, the Plasticity Index shall initially be targeted to the middle of the range.			
(++)	Value applicable to material passing 19.0 mm sieve: initially at optimum moisture content and 98% of maximum dry density as determined by test using Modified compactive effort, but then soaked for four days prior to the CBR test.			
(+++)	Applicable to crushed river gravels if approved for use.			
(++++)	Value applicable to material passing 19.0 mm sieve: initially at optimum moisture content and 98% of maximum dry density as determined by test using Modified compactive effort. The Contractor shall provide to the Superintendent the target grading and Plasticity Index required to satisfy the specified permeability requirement.			

- (b) Unsound and marginal rock in that fraction of the product retained on a 4.75 mm AS sieve shall not exceed the percentages specified in Table 812.052.

Table 812.052 - Unsound and Marginal Rock Content

Class	Total of Marginal and Unsound Rock % (max)	Unsound Rock % (max)
1	10	5
2	10	7
3	20	10
4	-	-

- (c) For PMWMCR, the aggregates and water shall be mixed in a pug mill. PMWMCR shall be supplied at the moisture content as nominated by the Contractor to suit the weather conditions and the methods used for spreading and compaction of the material in the roadbed.

PMWMCR shall be supplied to the roadbed as specified in Table 812.053. If not specified, material may either be supplied as PMWMCR or as crushed rock.

Table 812.053 – Material to be Supplied as PMWMCR

Location	Material			
	Class 1	Class 2	Class 3	Class 4
##:	##:	##:	##:	##:

- (d) Sulphide Mineralisation

Crushed rock produced from sources identified in the current Quarry Investigation Report as containing sulphide/ sulphate mineralisation shall not be used unless the fraction of the crushed rock product passing the 2.36 mm sieve complies with the pH and conductivity test requirements specified in Table 812.054.

Table 812.054 - pH and Conductivity Test Requirements

Test	Test Value	Soil to Water Ratio
pH (units)	6.0 (min)	1 : 2.5
Conductivity (<input type="checkbox"/> S/cm)	1500 (max)	1 : 1

Materials that do not comply with the specified requirements of Table 812.054 may be accepted subject to the approval of the Superintendent. In order to supply material conforming to the requirements of Table 812.054, the Contractor is required to specify the method and amount of hydrated or quick lime to be combined with the product to meet the requirements of Table 812.055.

Table 812.055 - pH of Material after Addition of Lime

Test	Test Value
pH (units)	10.0 (minimum)

Where it is intended to stockpile base or subbase crushed rock which contains sulphide mineralisation exceeding the test values contained in Table 812.054 the lime stabilising agent shall be added at the time of production of the crushed rock and before stockpiling.

- (e) Assessment of Plasticity Index (PI)

The PI shall be tested for compliance with the limits specified in Table 812.051 at the frequency specified in Table 812.131 on a representative sample of the material.

812.06 ADDITION OF WATER

Water added to the crushed rock shall be clean and substantially free from detrimental impurities such as oils, salts, acids, alkalis and vegetable substances. Water sources shall be tested for electrical conductivity and pH, in accordance with the current Australian Standards as listed in Section 175. The electrical conductivity shall not be more than 3500 $\mu\text{S}/\text{cm}$ and pH within the range of 6 to 10. Water sources classified by the relevant water authority as potable water shall be exempt from this requirement. Water sources shall be tested at a maximum of twelve monthly intervals or when the nature of the water source has changed. The use of reclaimed water will require the approval of the Superintendent and shall conform to the VicRoads guidelines for reclaimed water as listed under other referenced documents in Section 175.

812.07 GRADING OF UNCOMPACTED CLASS 1 AND CLASS 2 CRUSHED ROCK AND PMWMCR BASE

After completion of production, but before compaction, Class 1 and Class 2 crushed rock and PMWMCR base shall comply with the relevant grading requirements of Tables 812.071 and 812.072 corresponding to the rock type and the assigned Los Angeles Value of the material source. The grading shall not extend from the coarse limit on one sieve to the fine limit on the following sieve or vice versa.

Unless otherwise advised as a part of the crushed rock mix design registration process, the initial target grading shall be at or near the centre of the specified grading envelope. The target grading may be varied from time to time to achieve the specified post-compaction grading. The specified grading limits shall remain unchanged regardless of the target grading. The grading of 20 mm Class 1 or 2 crushed rock base manufactured from an igneous or metamorphic source rock (other than granitic source rock) with an assigned Los Angeles Value 25 or less shall comply with the requirements of Table 812.071.

Table 812.071 - Grading Limits for 20 mm Class 1 or 2 Base for all Rocks (except Granitic Rocks) with a Los Angeles Value of 25 or less

Sieve Size AS (mm)	Test Value before Compaction	
	Limits of Grading (% Passing by Mass)	Retained between Sieves (% by Mass)
26.5	100	0 - 5
19.0	95 - 100	7 - 18
13.2	78 - 92	10 - 16
9.5	63 - 83	14 - 24
4.75	44 - 64	10 - 20
2.36	30 - 48	14 - 28
0.425	14 - 22	6 - 13
0.075	7 - 11	

The grading of 20 mm Class 1 or 2 crushed rock base manufactured from an igneous and metamorphic source rock and all granitic source rock and where permitted for use, sedimentary source rock, with an assigned Los Angeles Value 26 or greater shall comply with the requirements of Table 812.072.

Table 812.072 - Grading Limits for 20 mm Class 1 or 2 Base from Granitic Rocks and all other Rocks with a Los Angeles Value of 26 or more

Sieve Size AS (mm)	Test Value before Compaction	
	Limits of Grading (% Passing)	% Retained between Sieves
26.5	100	0 - 5
19.0	95 - 100	7 - 18
13.2	78 - 92	10 - 16
9.5	63 - 83	14 - 24
4.75	44 - 64	10 - 20
2.36	29 - 48	15 - 29
0.425	13 - 21	7 - 14
0.075	5 - 9	

812.08 GRADING OF UNCOMPACTED CLASS 3 CRUSHED ROCK AND PMWMCR SUBBASE

(a) Class 3 Crushed Rock Subbase

After completion of production, but before compaction, Class 3 crushed rock and PMWMCR subbase shall comply with the relevant grading requirements of Tables 812.081 to 812.084 corresponding to the assigned Los Angeles Value and the nominal size of the material. The crushed rock grading shall not extend from the coarse limit on one sieve to the fine limit on the following sieve or vice versa.

Unless otherwise advised as a part of the crushed rock mix design registration process, the initial target grading shall be at or near the centre of the specified grading envelope. The target grading may be varied from time to time to achieve the specified post-compaction grading. The specified grading limits shall remain unchanged regardless of the target grading.

The grading of 20 mm Class 3 subbase manufactured from an igneous (other than granitic) and metamorphic source rock with an assigned Los Angeles Value 25 or less shall comply with the requirements of Table 812.081.

Table 812.081 - Grading Limits for 20 mm Class 3 Subbase from all Rocks (except Granitic Rocks) with a Los Angeles Value of 25 or less

Sieve Size AS (mm)	Test Value before Compaction – Limits of Grading (% Passing by mass)
26.5	100
19.0	95 – 100
13.2	75 – 95
9.5	60 – 90
4.75	42 – 76
2.36	28 – 60
0.425	14 – 28
0.075	6 – 13

The grading of 20 mm Class 3 subbase manufactured from an igneous and metamorphic source rock with an assigned Los Angeles Value 26 or greater and all sedimentary and granitic source rock shall comply with the requirements of Table 812.082.

Table 812.082 - Grading Limits for 20 mm Class 3 Subbase from Granitic Rocks and all other Rocks with a Los Angeles Value of 26 or more

Sieve Size AS (mm)	Test Value before Compaction – Limits of Grading (% Passing by mass)
26.5	100
19.0	95 – 100
13.2	75 – 95
9.5	60 – 90
4.75	42 – 76
2.36	28 – 60
0.425	10 – 28
0.075	2 – 10

The grading of 40 mm Class 3 subbase manufactured from an igneous (other than granite) and metamorphic source rock with an assigned Los Angeles Value 25 or less shall comply with the requirements of Table 812.083.

Table 812.083 - Grading Limits for 40 mm Class 3 Subbase from all Rocks (except Granitic Rocks) with a Los Angeles Value of 25 or less

Sieve Size AS (mm)	Test Value before Compaction – Limits of Grading (% Passing by mass)
53.0	100
37.5	95 - 100
26.5	75 - 95
19.0	64 - 90
9.5	42 - 78
4.75	27 - 64
2.36	20 - 50
0.425	10 - 23
0.075	6 - 12

The grading of 40 mm Class 3 Subbase manufactured from an igneous and metamorphic source rock with an assigned Los Angeles Value 26 or greater and all sedimentary and granitic source rock shall comply with the requirements of Table 812.084.

Table 812.084 - Grading Limits for 40 mm Class 3 Subbase for Granitic Rocks and all other Rocks with a Los Angeles Value of 26 or more

Sieve Size AS (mm)	Test Value before Compaction – Limits of Grading (% Passing by mass)
53.0	100
37.5	95 - 100
26.5	75 - 95
19.0	64 - 90
9.5	42 - 78
4.75	28 - 64
2.36	20 - 50
0.425	7 - 23
0.075	2 - 9

(b) Class 4 Crushed Rock Subbase

After completion of production, but before compaction, Class 4 crushed rock subbase shall comply with the relevant grading requirements of Table 812.085. The crushed rock grading shall not extend from near the coarse limit on one sieve to near the fine limit on the following sieve or vice versa.

Class 4 subbase crushed rock of nominal size differing from that specified may be accepted by the Superintendent provided it meets the grading requirements of Table 812.085 corresponding to a nominal size adjacent to that specified.

Table 812.085 - Grading Requirements for Class 4 Crushed Rock

Sieve Size AS (mm)	Test Value before Compaction - Limits of Grading (% Passing by mass)						
	Nominal Size (mm)						
	50	40	30	25	20	14	10
75.0	100						
53.0		100					
37.5			100	100			
26.5					100		
19.0	54-75	64-90				100	100
9.5			48-70	54-75			
4.75					42-76	54-75	64-84
2.36							
0.425	7-21	7-23	9-24	10-26	10-28	15-32	18-35
0.075	2-10	2-12	2-12	2-13	2-14	6-17	7-18

812.09 CRUSHED ROCK MIX DESIGN

Crushed rock mixes proposed for use on specified works can be registered in accordance with VicRoads Code of Practice for Registration of Crushed Rock Mix Designs as listed in Section 175.

All mix designs registered with VicRoads are issued a status according to compliance as:

General	The requirements of Code of Practice RC500.02 have been met.
Conditional	Mixes which do not comply in all respects with the requirements of Code of Practice but which are considered appropriate for use subject to conditions attached to the registration.
Experimental	A mix that does not comply with the requirements of Code of Practice and for which there is little or no history of successful performance and requires more trials to be undertaken and monitored before it is registered as a Conditional mix.
Superseded	Superseded by another registered mix but details are retained for record purposes.
Withdrawn	Withdrawn from use because of unsatisfactory field performance but details are retained for record purposes.

No conditional or experimental crushed rock mix shall be supplied until the mix has been registered and the Superintendent has been advised of any conditions attached.

Approval of a registered crushed rock mix for use under the Contract does not guarantee the handling properties or performance of the mix nor relieve the Contractor from contractual obligations in regards to rectification of defects.

New mix designs shall be submitted for registration where:

- it is proposed to change the source, grading or nature of the components; and
- current registered crushed rock mix designs are more than two years old.

If a registered crushed rock mix has unsatisfactory handling or field performance, the Superintendent may request the mix be de-registered in accordance with VicRoads Code of Practice for Registration of Crushed Rock Mix Designs.

The allowable production tolerances on the nominated target grading will be the full range of the grading envelope. However, where the supplied grading varies by more than + or – 2% of the target grading nominated, the Contractor will be required to provide any additional information requested to clearly demonstrate that all requirements (e.g. permeability) of the specification are still being met.

812.10 MOISTURE CONTENT

(a) Crushed Rock

Where payment is to be made on a mass basis, the average moisture content of crushed rock at the plant shall not exceed 4% by mass unless the Contractor has, at the time of tendering, nominated an upper limit of average moisture content greater than 4%. In the latter case the difference between the nominated value and the specified value will be taken into account when tenders are being considered. The average moisture content of crushed rock supplied on any one day will be determined from three samples taken at random on that day. If the average moisture content is greater than that specified or nominated, the material may be rejected. If material is accepted, payment will be made for the mass determined by deducting the calculated mass of excess moisture from the net mass shown on the delivery dockets.

(b) Plant Mixed Wet Mixed Crushed Rock

Where the Contract includes supply and delivery only, the moisture content of the mixture at the point of delivery, expressed as a percentage by mass, shall be within plus 0.5 to minus 1.0 of the target nominated from time to time by the Superintendent.

812.11 MATERIAL SUPPLIED TO STOCKPILE

The Contractor is required to supply PMWMCR or crushed rock to stockpile prior to delivery to the roadbed to the following requirements:

- (a) the product, after recovery from the stockpile, complies with this specification;
- (b) the stockpile site is clean, adequately paved, and well drained;
- (c) if a stockpile is constructed in more than one layer, each layer is fully contained within the area occupied by the upper surface of the preceding layer;
- (d) all crushed rock supplied to stockpile shall have a minimum moisture content of 3.5% by mass;
- (e) all PMWMCR delivered to stockpile shall be supplied at a moisture content of not less than the optimum moisture content unless the material is to be wet mixed again prior to delivery to the roadbed where the minimum moisture content in stockpile shall be not less than 3.5% by mass;
- (f) the surface of the stockpile shall be kept damp to prevent a net loss of moisture and to minimise the generation of airborne dust.

812.12 HANDLING OF CRUSHED ROCK PRODUCTS

Handling of crushed rock including stockpiling and loading of trucks shall be undertaken to minimise segregation.

812.13 MINIMUM TESTING REQUIREMENTS

The Contractor shall test the crushed rock and PMWMCR at such a frequency to ensure that the material consistently complies with the specification. The test frequency shall initially not be less than that shown in Table 812.131, except that the test frequency for Grading, Plasticity Index, Unsound Rock Content, pH and Conductivity, and Degradation Factor, may be halved where the most recent ten successive test results meet the specification. If any subsequent test result fails, another test shall be immediately undertaken. If the second test fails the test frequency shall revert to the minimum test frequency specified in Table 812.131 and the Contractor shall not return to half the test frequency until a further ten successive test results comply with the specification.

Table 812.131 - Minimum Frequency of Testing

Test	Minimum Frequency of Testing
Grading - Final Product	On each production day - One per 500 tonnes or part thereof.
Unsound Rock Content (+)	One per production day of a sample taken from the final product or from an individual size component.
Moisture Content - Crushed Rock (++) - PMWMCR	One per production day On each production day - One per 500 tonnes or part thereof
Plasticity Index	Class 1 Base In each production week - One per 2500 tonnes or part thereof. Class 2 Base and Classes 3 and 4 Subbase In each production month - One per 5000 tonnes or part thereof.
California Bearing Ratio (+++)	When in the opinion of the Superintendent, the nature and/or physical properties of the material have changed. CBR results which are greater than six months old during the course of supply shall be re-tested.
Degradation Factor - Fine Aggregate (+)	One per 1000 tonnes on each production day.
Permeability	When in the opinion of the Superintendent, the nature and/or physical properties of the material have changed. Permeability results which are greater than six months old during the course of supply shall be re-tested.
pH and Conductivity (++++)	One per production day
Flakiness Index	One per production month
Crushed Particles (+++++)	One per production month
Testing of Additives	On each production day - Grading and Plasticity Index per 250 tonnes of additive, unless otherwise specified in the registered mix design.
(+)	Not applicable to Class 4 subbase unless otherwise specified
(++)	Applicable only when payment is to be made on a mass basis
(+++)	Applicable to Class 4 subbase
(++++)	Applicable only to sources identified in the current Quarry Investigation Report as containing sulphide/sulphate mineralisation
(+++++)	Applicable to crushed river gravels