

From: Elliott Curtis [REDACTED]
Sent: 16 January 2019 14:46
To: kazys [REDACTED]
Subject: Re: Stone Porosity

Hello Kazys,

Pleasure to speak to you yesterday.

Regarding the document you sent through 'Bardon Aggregates' was an old trading name that got bought out by Aggregate Industries a number of years ago so unfortunately I will be unable to produce a similar type of document as our software has moved on since then and our CE certificates no longer state Void specification limits.

I have attached the requested grading certificates covering the range of SuDS friendly materials we do as discussed.

Finally regarding how we calculate void content;

$\text{Compacted Bulk Density} \div \text{Oven Dry Relative Density} \times 100 = (\#)$
 $100 - (\#) = \text{Void Content}$

In the case of Torr this can be done on the range of materials requested.

Density / Void Figures

Type 3 - 1.75
 $1.75 \div 2.66 \times 100 = 66$
 $100 - 66 = 34$
Type 3 = 34% Voids

2/6 SS - 1.48
 $1.32 \div 2.66 \times 100 = 56$
 $100 - 56 = 44$
2/6 SS = 44% Voids

4/20 SS - 1.57
 $1.43 \div 2.66 \times 100 = 60$
 $100 - 60 = 40$
4/20 SS = 40% Voids

20/40 SS - 1.60
 $1.60 \div 2.66 \times 100 = 61$
 $100 - 61 = 39$
20/40 SS = 39% Voids

Kind Regards
Elliott Curtis
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Aggregates/Asphalt South

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A member of LafargeHolcim

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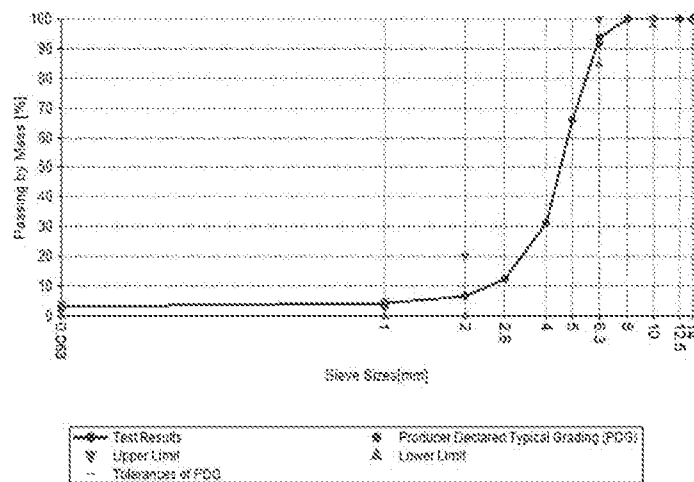
Aggregate - Estimation	
AGGREGATE CODE EN12620NNNN26.3Gc8520Nf4NNNNA/0000841	
Test order:	ICOA/0013703
Project No:	
Project designation:	
Initiator	
Project date:	14/01/2019
Producer Material:	Torr Quarry Aggregate Industries Torr Works East Cranmore
Designation (SIB):	2/6mm Single Size
Sample No:	SCOA/0013136
Material No:	A/0000841
Valid from:	16/01/2019

Requirements / Designation and description	
EN12620, ,	
Source:	Torr Quarry
Type (see EN 932-3):	Limestone
Aggregate size (d/D):	2/6
Aggregate Code No:	
(Sales call):	

Delivery / Sampling	
Sample No:	SCOA/0013136
Delivery date:	14/01/2019
Sampling date:	14/01/2019
Place of sampling:	Quarry
Sampling point:	Stockpile
Address:	
Delivery ticket:	102644C
Delivery time:	09:15
Sampling time:	06:05
Sampling mass:	
Sampler:	Operative
Reason For Sampling:	Routine Testing

Aggregate - Estimation	Test order ICOA/0013703
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EN 933-1 Particle Size Distribution, Sieving Method											
Laboratory: Colemans AAL						Operator: Colin Cook			Date of Test: 15/01/2019		
Grading Coefficient(K):						Sum-D:			Fineness Modulus:		
Sieve [mm]	0.063	1	2	2.8	4	5	6.3	8	10	12.5	14
D[%]	3.0	4	6	12	31	66	94	100	100	100	100
D[%] POG	2.5	3	7				92		100		
Cumulative percentages passing [%] [%]						Specified max value Gc80/20			Actual value Gc80/20		
Fines Content [%]						Specified max value 13			Actual value 13		



EN 1097-5: Water Content by drying in a ventilated oven			
Laboratory: Colemans AAL		Operator: Colin Cook	
Moist Test Portion: 709 [g]		Dry Test Portion: 703 [g]	
mass of water: 6 [g]		Water Content: 0.9 [%]	
Water content by drying in a ventilated room		Specified max Declared Value	Actual value 0.80

Somerset, 16/01/2019

Richard Chapman
Aggregates/Asphalt ATM

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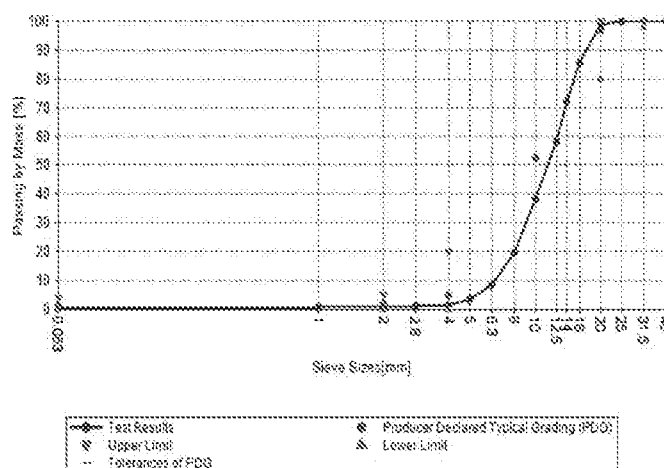
Aggregate - Estimation	
AGGREGATE CODE	
SHW503PipeBedNNGraded420Gc8020Nf4NA/0000004	
Test order:	tCOA/0013254
Project No:	
Project designation:	
Initiator	
Project date:	07/01/2019
Producer Material:	Torr Quarry Aggregate Industries Torr Works East Cranmore
Designation (SIB):	4/20mm Washed
Sample No:	SCOA/0012744
Material No:	A/0000004
Valid from:	16/01/2019

Requirements / Designation and description	
SHW, 503 P B,	
Source:	Torr Quarry
Type (see EN 932-3):	Limestone
Aggregate size (d/D):	4/20
Aggregate Code No:	
(Sales cal):	

Delivery / Sampling	
Sample No:	SCOA/0012744
Delivery ticket:	102599C
Delivery date:	07/01/2019
Delivery time:	09:00
Sampling date:	07/01/2019
Sampling time:	08:05
Place of sampling:	Quarry
Sampling mass:	
Sampling point:	Belt
Sampler:	Tim Curtis
Address:	
Reason For Sampling:	Routine Testing

Aggregate - Estimation	Test order tCOA/0013254
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EN 933-1 Particle Size Distribution, Sieving Method	
Laboratory: Colemans AAL	Operator: Keira Leigh Underhill
Grading Coefficient(K):	Sum-D:
Date of Test:	08/01/2019
Fineness Modulus:	
Sieve (mm)	0.063 1 2 2.5 4 5 6.3 8 10 12.5 14 16 20 25 31.5 40
D[%]	0.5 1 1 1 2 4 8 20 38 58 72 86 98 100 100 100
D[%] PDG	1.0 2 5 53 97 100
Cumulative percentages passing [%] [%]	Specified max G 80/20 value
Actual value	G 80/20
Fines Content [%]	Specified max 14 value
Actual value	11



EN 1097-5: Water Content by drying in a ventilated oven			
Laboratory: Colemans AAL	Operator: Keira Leigh Underhill	Date of Test:	08/01/2019
Moist Test Portion:	2085 [g]	Dry Test Portion:	2046 [g]
mass of water:	40 [g]	Water Content:	1.9 [%]
Water content by drying in a ventilated room	Specified max Declared Value	Actual value	1.90

Somerset, 16/01/2019

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