

APPENDIX A
PROPERTIES OF THE FILLERS

Densities

Filler	Density [g/cm ³]
K101	2.69
K102	2.65
K103	2.95
K104	2.61
K105	2.72
K106	2.75
K107	2.66
K108	2.65
K109	2.72
K110	2.67
K111	2.72
K112	2.69
K113	2.70
K114	2.66

K115	2.69
K116	2.98
K117	2.67
K118	2.68
K119	2.69
K120	2.85
K121	2.85
K122	2.71
K123	2.71
K124	2.70
K125	2.85
K126	2.70
K127	2.68

Table 1. Specific densities for every studied filler.

BET surface

Filler	BET [m ² /kg]
K101	1177
K102	1188
K103	1265
K104	1552
K105	1395
K106	2161
K107	1548
K108	3742
K109	3351
K110	2134
K111	
K112	
K113	1784
K114	1026

K115	1289
K116	2234
K117	1535
K118	1113
K119	2540
K120	
K121	
K122	
K123	
K124	
K125	
K126	2268
K127	1100

Table 2. Obtained BET surface values.

Mineralogy

125-250 / in %	Quartz	Feldspar	Biotite	Hornblende	udda/opakt	felsisk	mafisk	kalcit	klorit	Pyroxen	Opaka	Salisk
K101	40.30	29.30	19.30	4.00	0.60	5.30	1.00					
K102	54.50	28.30	8.60	1.30	0.60	6.60						
K103		32.00	0.50	12.00		14.50	24.00			14.00	2.50	
K104	47.00	37.30	1.00	1.30		12.60		0.60				
K105	30.20	30.20	0.30	13.90	2.30	11.90	5.30	0.90	4.30			
K106	31.50	36.50	7.50	5.50	1.00	15.50	2.50					
K107	43.60	32.00	3.30	5.60	3.60	10.30	1.00	0.30				
K108	38.50	25.00	24.00				9.38					3.13
K109	29.00	30.50		9.50		23.50	4.50	1.00	2.00			
K110	39.50	34.00	3.50	3.50		10.00	4.00	4			1.5	
K111	18	27	11	23		17.00					4	
K112	37.5	24.5	21			13	1.5				2.5	
K113	42.5	24	1	9		17.5	3.5				2.5	
K114	54.5	35	0.5	2.5		6	0.5				1	
K115	38.5	21	20.5			16.5	2				1.5	
K116												
K117	34	26.5	15	16		5	1				2.5	
K118	46	36.5	4.6	6.5			6.5					
K119	30	35.5	12	5								14
K120												
K121												
K122												
K123												
K124												
K125												
K126	31.5	11	43.5				0.5					10
K127	37	28.5	9	8			6.5					8.5

Table 3. Mineralogical and petrographic classification of the used materials.

* K116 is a diabase and from K120 to K125 are not granites either and, thus, they don't contain biotites. This, and the fact that they are expensive to obtain, are the reasons why the mineralogic composition was not obtained for these ones.

Filler	Biotite [0,125-0,250] [%]
K101	19.30
K102	8.60
K103	0.50
K104	1.00
K105	0.30
K106	7.50
K107	3.30
K108	24.00
K109	0.00
K110	3.50
K111	15.50
K112	21.00
K113	1.00
K114	0.50

K115	20.50
K116	0.00
K117	15.00
K118	4.6
K119	12
K120	
K121	
K122	
K123	
K124	
K125	
K126	43.5
K127	9

Table 4. Proportion of free biotite in every material.

Void fraction

Filler	void volume [0.125-0.250] [cm3]
K101	57.81
K102	56.98
K103	54.68
K104	54.25
K105	58.27
K106	59.13
K107	57.82
K108	59.96
K109	57.54
K110	58.16
K111	56.51
K112	59.33
K113	57.76

K114	55.56
K115	60.37
K116	59.43
K117	58.05
K118	58.51
K119	59.63
K120	56.74
K121	56.04
K122	52.84
K123	50.96
K124	57.07
K125	56.99
K126	62.63
K127	58.69

Table 5. Void fraction results for every filler

