

WL01 Material Technoial Data



+/- 0. +/- 0.		Suitable Casting A Suitable Casting A Typical Core Thick Typical Core Geon Typical Core Featu	lloys:- ness:- netry:- ires:-	Alum Min => 3mm Any Co	sting up to 935°C ninium Max =< 100mm omplexity eatures		
+/- 0. +/- 0.		Typical Core Thick Typical Core Geon Typical Core Featu	ness:- netry:- ires:-	Min => 3mm Any Co	Max =< 100mn		
+/- 0. +/- 0.		Typical Core Geon Typical Core Featu	netry:- ires:-	Any Co	omplexity		
+/- 0. +/- 0.		Typical Core Featu	res:-		<u> </u>		
+/- 0. +/- 0.		Typical Core Featu	res:-	Any F	eatures		
+/- 0. +/- 0.	nits	Тур			- -		
+/- 0. +/- 0.	IIIIS	ТУР	Typical Result - % of Ceramic Core Body				
+/- 0.			icai Nesuit - 70 Oi	Ceramic Core Bo	Juy		
	.50 %	64.58%					
, ,	.50 %	22.92%					
+/- 0.	.50 %	11.90%					
+/- N	V/A %	0.60%					
Lim	nits	Typical Result					
			_				
				<u> </u>			
	50 ppm		500 ppm				
	10 ppm	20 ppm					
	10 ppm						
	10 ppm	20 ppm					
+/-	15 ppm	50 ppm					
<u>I</u> st Bars (Di	imension	s 100mm x 12mm >	(4mm) produced	at Clan Ceramics	s Consultancy Lt		
· ` `		Typical Result - Fired to 925°C					
	50 0/		20				
		, ,					
+/- 0.	.50 %	16.00 %					
Lim	nits	Typical Result - Fired to 925°C					
+/-	0 %	0.00 %					
Lim	nits	Typical Result - Fired to 925°C					
+/-	10 %	5 %					
+/-	50 %	120 Minutes					
+/-	50 %	60 Minutes					
+/- 1	100 %	30 Seconds					
		Modulus of Rupture - 3 Point Test @ 80mm Spacing					
Lim	nits	Psi	Мра	Newtons	Deflection - mn		
+/-	20 %	1233	8.50	8.50	3.00		
	20 %	580	4.00	4.00	1.75		
	20 %	870	6.00	6.00	1.75		
	20 %	5803	40.00	40.00	2.50		
	+/- +/- +/- +/- +/- st Bars (D Lir +/- 2 +/- 2 +/- 2 +/- 0 +/- 0 +/- 0 +/- 0 +/- 0 +/- 1 Lir +/- +/- +/- +/- +/- +/- +/- +/- +/- +/	+/- 50 ppm +/- 10 ppm +/- 10 ppm +/- 15 ppm +/- 15 ppm st Bars (Dimension Limits +/- 2.50 % +/- 2.50 % +/- 0.50 % +/- 0.10 % +/- 0.10 % +/- 0.10 % +/- 0.10 % +/- 0.50 % Limits +/- 10 % Limits Limits Limits Limits +/- 10 % +/- 10 % +/- 20 % +/- 20 % +/- 20 % +/- 20 %	+/- 50 ppm +/- 10 ppm +/- 10 ppm +/- 15 ppm st Bars (Dimensions 100mm x 12mm x) Limits +/- 2.50 % +/- 2.50 % +/- 0.50 % +/- 0.10 % +/- 0.10 % +/- 0.10 % +/- 0.50 % Limits 	+/- 50 ppm 500 +/- 10 ppm 20 +/- 10 ppm 20 +/- 15 ppm 500 tot Bars (Dimensions 100mm x 12mm x 4mm) produced Limits Typical Result -	+/- 50 ppm 500 ppm +/- 10 ppm 20 ppm +/- 10 ppm 20 ppm +/- 10 ppm 20 ppm +/- 15 ppm 50 ppm st Bars (Dimensions 100mm x 12mm x 4mm) produced at Clan Ceramics Limits Typical Result - Fired to 925°C +/- 2.50 % 30 % 35 % +/- 2.50 % 35 % 35 % +/- 2.50 % 22 % 35 ms/cm3 +/- 2.50 % 2.58 gms/cm3 36 ms/cm3 +/- 0.50 % 2.58 gms/cm3 36 ms/cm3 +/- 0.10 % 0.20 mm 30 mm +/- 0.10 % 0.25 mm 30 mm +/- 0.10 % N/A % 30 mm +/- 0.50 % 16.00 % 30 mm -/- 0.50 % 120 Minutes 30 Seconds -/- 10 % 5 % 30 Seconds -/- 10 % 30 Seconds 30 Seconds		

Important Information

Test result's in this document are based upon the test's undertaken at External Test Facilities & Clan Ceramics Consultancy Ltd the results may vary due to:-

- < The type and make of the equipment being used
- < The environmental conditions within the facility where the tests are being undertaken
- < The process settings and general maintenance on the equipment being used
- < The operatives personal experience within the process environment

All test results and suggested limits are intended as a guideline only and do not form part of the basis for any inspection criteria as regards the pass or fail of any goods and / or services that are supplied - which in general would be determined by the customer's own particular requirements which would include testing of the materials prior to any purchase order being raised



WL01 Material Technoial Data



	Docu	ment Is	ssue Informa	ition				
Document Reference:-	CCCLMTIWL01			Suitable Casting A	Applications:-	Aluminium Cas	sting up to 935°C	
Issue No:-	1	1		Suitable Casting A		Alur	ninium	
Issue Date:-	24 /09 /20			Typical Core Thick	<u> </u>	Min => 3mm	Max =< 100mm	
Issued By:-	Mr Kevin Dawson	7		Typical Core Geor	metry:-	Any Co	omplexity	
Authorised By:-	Mr Dennis Dixon	1		Typical Core Feat	<u> </u>		Features	
·		_		1				
Ceramic Core Body Composition			Limits	Typical Result - % of Ceramic Core Body			ody	
		<u> </u>						
Silica	SiO ₂	+/-	0.50 %	64.58%				
Zircozon	ZrSiO ₄	+/-	0.50 %	22.92%				
Leachability Additive	K ₂ SO ₄ & MgSO ₄	+/-	0.50 %	11.90%				
Other(s)		+/-	N/A %		0.6	60%		
Trace El	lement Analysis		Limits		Typica	l Result		
Bismuth	Bi	+/-	1 ppm		5	ppm		
Iron	Fe	+/-	50 ppm		500	ppm		
Lead	Pb	+/-	10 ppm					
Silver	Ag	+/-	10 ppm					
Tin	Sn	+/-	10 ppm					
Zinc	Zn	+/-	15 ppm					
The following information is typic	ral recult's that can be expected using To	ot Para	· (Dimonsion	100mm v 12mm	v 4mm) produced	Lat Clan Caramia	s Consultanov I to	
	cal Properties	St Dais	Limits	s 100mm x 12mm x 4mm) produced at Clan Ceramics Consultanc Typical Result - Fired to 925°C				
1 11901					Typical Floodic	1 1100 10 020 0		
Apparent Porosity		+/-	2.50 %		30	%		
True Porosity			2.50 %			%		
Water Absorption			2.50 %			%		
Apparent Bulk Density			0.50 %			gms/cm3		
Bulk Density			0.50 %	2.50 gms/cm3				
Creep Test			0.10 %	0.20 mm				
Slump Test			0.10 %	0.25 mm				
Thermal Expansion			0.10 %	N/A %				
Loss on Ignition			0.50 %	16.00 %				
Process Shrink - From Mould to Fired			Limits	Typical Result - Fired to 925°C				
Free Linear Shrinkage (Tool to Fir	red)	+/-	0 %	0.00 %				
			Linaita	Typical Result - Fired to 925°C				
Cnem	nical Analysis		Limits		rypical Result	- Fired to 925 C		
Cristobalite - Post Process Fired			10 %	5 %				
eachability - Break Up Time (Cold water @ Ambient 20°C)			50 %	120 Minutes				
Leachability - Break Up Time (Warm water 35°C)		+/-	50 %	60 Minutes				
eachability - Break Up Time (Water Jet Pressure to 2000 to 6000 Psi)			100 %	30 Seconds				
				Modulus of Rupture - 3 Point Test @ 80mm Spacing				
Impregnatio	n (Fired to 1200°C)		Limits	Psi	Мра	Newtons	Deflection - mm	
Initiated (Occurs 2) Other III To	1 @ 0000	+/-	00.04	4000	0.50	0.50	0.00	
Injected (Green) Strength - Tested @ 20°C			20 %	1233	8.50	8.50	3.00	
Fired @ 850°C & Tested @ 20°C - Not Impregnated			20 %	580	4.00	4.00	1.75	
Fired @ 925°C & Tested @ 20°C - Not Impregnated			20 %	870	6.00	6.00	1.75	
Cured @ 185°C & Tested @ 20°C	- Vacuum Resin Impregnated	+/-	20 %	5803	40.00	40.00	2.50	
	ln	nortan	t Information	.				

Important Information

Test result's in this document are based on test's undertaken at Raw Material Suppliers / Test Facilities & Clan Ceramics Consultancy Ltd results may vary due to:-

- < The type and make of the equipment being used
- < The environmental conditions within the facility where the tests are being undertaken
- < The process settings and general maintenance on the equipment being used
- < The operatives personal experience within the process environment

All test results and suggested limits are intended as a guideline and do not form part the basis for inspection criteria as regards the pass or fail of goods supplied Which in general would be determined by the customer's own requirements.