



Materials Declaration Form


IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D

*: Required Field

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	14-03-2019
Company Unique ID	NL 008751171B01		
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Authorized Representative *	MDG MD CHAMPION	Representative Title	MDG MD CHAMPION
Representative Phone *	Refer to Supplier Comment section	Representative Email *	Refer to Supplier Comment section
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/web/en/support/support.html		

Uncertainty Statement	
<p>While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.</p>	
Legal Statement	
Supplier Acceptance *	<div style="display: flex; justify-content: space-between;"> true Legal Declaration * Standard </div>
Legal Statement	<p>Supplier certifies that it gathered the provided information and such information is true and correct to the best of its knowledge and belief, as of the date that Supplier completes this form. Supplier acknowledges that Company will rely on this certification in determining the compliance of its products. Company acknowledges that Supplier may have relied on information provided by others in completing this form, and that Supplier may not have independently verified such information. However, in situations where Supplier has not independently verified information provided by others, Supplier agrees that, at a minimum, its suppliers have provided certifications regarding their contributions to the part(s), and those certifications are at least as comprehensive as the certification in this paragraph. If the Company and the Supplier enter into a written agreement with respect to the identified part(s), the terms and conditions of that agreement, including any warranty rights and/or remedies provided as part of that agreement, will be the sole and exclusive source of the Supplier's liability and the Company's remedies for issues that arise regarding information the Supplier provides in this form.</p>

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32L452VCI6	P2MJ*462XXXY	A	9996	14-03-2019
	Amount	UoM	Unit type	ST ECOPACK Grade
	52.50	mg	Each	ECOPACK® 2
	Comment	ECOPACK® 2 is STMicroelectronics trade name for ROHS compliant device without Brominated and Chlorinated compound (900ppm) and without Antimony oxide flame retardant (in each organic material)		

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
3	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
SOLDERBALL (Sn96.5Ag3.5)	NAC	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
BGA	7x7x0.6	100	No lead	
Comment	Package : A0C2 UFBGA 7x7x0.60 100L R12sq P0.5 8219030			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 2015	
Query	Response
1 - Product(s) meets EU RoHS requirement without any exemptions	TRUE
2 - Product(s) meets EU RoHS requirements except lead in solder and this usage may qualify under the lead in solder '7b' exemption (other selected exemptions may apply)	FALSE
3 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	FALSE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption Id.	Description

QueryList : REACH-27th June 2018				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				TRUE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	P2MJ*462XXXY				5.999999.0	100.0002.0
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die or dies	M-011 Other inorganic materials	2.612	mg	supplier	die	Silicon (Si)	7440-21-3		2.188	mg	837572	41576
				supplier	metallization	Aluminium (Al)	7429-90-5		0.020	mg	7657	381
				supplier	metallization	Copper (Cu)	7440-50-8		0.180	mg	68913	3429
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.058	mg	22205	1105
				supplier	metallization	Titanium (Ti)	7440-32-6		0.002	mg	766	38
				supplier	metallization	Tungsten (W)	7440-33-7		0.002	mg	766	38
				supplier	Passivation	Silicon Nitride	12033-89-5		0.046	mg	17611	876
				supplier	Passivation	Silicon Oxide	7631-86-9		0.116	mg	44410	2210
				supplier	CORE	Glass Cloth	65997-17-3		1.349	mg	84900	25687
				supplier	CORE	Epoxy resin	61788-97-4		0.318	mg	20000	6051
SUBSTRATE (DS7409HGB)	M-011 Other inorganic materials	15.884	mg	supplier	CORE	Flame resistant epoxy resin	223769-10-6		0.318	mg	20000	6051
				supplier	CORE	Heat resistant resin	25722-66-1		0.318	mg	20000	6051
				supplier	CORE	Silica filler	7631-86-9		0.793	mg	49900	15097
				supplier	CORE	Metal Hydroxide	Proprietary		0.079	mg	5000	1513
				supplier	COPPER FOIL	Copper (Cu)	7440-50-8		3.172	mg	199700	60420
				supplier	SOLDERMASK (AUS308)	Talc containing no asbestiform fibers	14807-96-6		0.097	mg	6100	1846
				supplier	SOLDERMASK (AUS308)	Barium sulfate	7727-43-7		1.563	mg	98400	29771
				supplier	SOLDERMASK (AUS308)	Dipropylene monomethyl ether	34590-94-8		0.462	mg	29100	8804
				supplier	SOLDERMASK (AUS308)	Napthalene	91-20-3		0.048	mg	3000	908
				supplier	SOLDERMASK (AUS308)	Morpholine derivative	Proprietary		0.238	mg	15000	4538
				supplier	CU PLATING	Copper (Cu)	7440-50-8		6.109	mg	384600	116362
				supplier	NI PLATING	Nickel (Ni)	7440-02-0		0.913	mg	57500	17397
				supplier	AU PLATING	Gold (Au)	7440-57-5		0.108	mg	6800	2057
				DIE ATTACH (ATB-130U)	M-011 Other inorganic materials	0.716	mg	supplier	GLUE	Butadiene,acrylonitrile polymer,carboxy-term	68610-41-3	
supplier	GLUE	Phenol-formaldehyde polymer	9003-35-4						0.072	mg	100000	1364
supplier	GLUE	Phenol polymer with formaldehyde,glycidyl et	28064-14-4						0.067	mg	93000	1269
supplier	GLUE	Dapsone	80-08-0						0.068	mg	95000	1296
supplier	GLUE	Reaction product bisphenol-A-(epichlorhydrin	25068-38-6						0.007	mg	10000	136
supplier	GLUE	4,4, Isopropylidenediphenol	80-05-7						0.001	mg	2000	27
BONDING WIRE (MKE 4N)	M-011 Other inorganic materials	0.954	mg	supplier	BONDING WIRE	Gold (Au)	7440-57-5		0.954	mg	1000000	18164
SOLDERBALL (Sn96.5Ag3.5)	M-011 Other inorganic materials	3.105	mg	supplier	SOLDERBALL	Tin (Sn)	7440-31-5		2.996	mg	964895	57067
				supplier	SOLDERBALL	Silver (Ag)	7440-22-4		0.109	mg	35105	2076
ENCAPSULATION (GE-100LFC5)	M-011 Other inorganic materials	29.229	mg	supplier	MOLDING COMPOUND	Silica fused (SiO2)	60676-86-0		26.264	mg	898550	500267
				supplier	MOLDING COMPOUND	Epoxy resin	Proprietary		1.334	mg	45652	25416
				supplier	MOLDING COMPOUND	Phenol resin	Proprietary		1.186	mg	40580	22592
				supplier	MOLDING COMPOUND	Metal Hydroxide	Proprietary		0.297	mg	10145	5648
				supplier	MOLDING COMPOUND	Carbon black	1333-86-4		0.148	mg	5072	2824