



## Materials Declaration Form

<b>IPC Form Type *</b>	1752 Distribute	<b>Version</b>	2
<b>Sectionals *</b>	Material Info Manufacturing Info	<b>Subsectionals *</b>	A-D <i>* : Required Field</i>

<b>Supplier Information</b>			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2017-10-10
<b>Company Unique ID</b>	NL 008751171B01		
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Contact Phone *</b>	Refer to Supplier Comment section	<b>Contact Email *</b>	Refer to Supplier Comment section
<b>Authorized Representative *</b>	MDG MD CHAMPION	<b>Representative Title</b>	MDG MD CHAMPION
<b>Representative Phone *</b>	Refer to Supplier Comment section	<b>Representative Email *</b>	Refer to Supplier Comment section
<b>Supplier Comment</b>	Online Technical Support - STMicroelectronics : <a href="http://www.st.com/web/en/support/support.html">http://www.st.com/web/en/support/support.html</a>		

### Uncertainty Statement

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### Legal Statement

<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>	Standard
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### Legal Statement

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.

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32F777NIH7 STM32F777NIH7TR	4ARM*451XXXZ	A	9996	2017-10-10
	Amount	UoM	Unit type	ST ECOPACK Grade
	358.31	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	
Tin/Silver/Copper (SAC105)	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
BGA	13,13,1.2	216	No lead	
Comment	Package : A0L2 TFBGA 13X13X1.2 216L P 0.8 MM 8373526			

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- 7th July 2017				
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 :						Mfr Item Name	4ARM*451XXXZ				7000001.0	1000000.0				
note : Substance present with less 0.001mg will not be declared in this document																
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	15.907	mg	supplier	die	Silicon (Si)	7440-21-3		14.325	mg	900547	39979				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.111	mg	6978	310				
				supplier	metallization	Copper (Cu)	7440-50-8		0.719	mg	45200	2007				
				supplier	metallization	Cobalt (Co)	7440-48-4		0.002	mg	126	6				
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.100	mg	6287	279				
				supplier	metallization	Tungsten (W)	7440-33-7		0.323	mg	20306	901				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.084	mg	5281	234				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.243	mg	15276	678				
				SILICON DIE	M-011 Other inorganic materials	14.325	mg	supplier	DIE	Silicon (Si)	7440-21-3		14.325	mg	1000000	39980
				SUBSTRATE (DS7409HGB)	M-011 Other inorganic materials	112.657	mg	supplier	CORE	Glass Cloth	65997-17-3		19.152	mg	170000	53450
supplier	CORE	Epoxy resin	61788-97-4						4.506	mg	40000	12576				
supplier	CORE	Flame resistant epoxy resin	223769-10-6						4.506	mg	40000	12576				
supplier	CORE	Heat resistant resin	25722-66-1						4.506	mg	40000	12576				
supplier	CORE	Silica filler	7631-86-9						12.392	mg	110000	34585				
supplier	CORE	Metal Hydroxide	Proprietary						2.253	mg	20000	6288				
supplier	CORE	Copper (Cu)	7440-50-8						47.316	mg	420000	132053				
supplier	SOLDERMASK (AUS320)	Solvent naphtha(petroleum),heavy aromatic	64742-94-5						6.196	mg	55000	17293				
supplier	SOLDERMASK (AUS320)	Napthalene	91-20-3						0.653	mg	5800	1824				
supplier	SOLDERMASK (AUS320)	Phosphinoxide derivative	Proprietary						0.225	mg	2000	629				
supplier	SOLDERMASK (AUS320)	Talc containing no asbestiform fibers	14807-96-6						1.690	mg	15000	4716				
supplier	SOLDERMASK (AUS320)	Barium sulfate	7727-43-7						2.816	mg	25000	7860				
supplier	SOLDERMASK (AUS320)	Dipropylene glycol monomethyl ether	34590-94-8						1.690	mg	15000	4716				
supplier	CU PLATING	Copper (Cu)	7440-50-8						4.056	mg	36000	11319				
supplier	NI PLATING	Nickel (Ni)	7440-02-0						0.563	mg	5000	1572				
supplier	AU PLATING	Gold (Au)	7440-57-5		0.135	mg	1200	377								
DIE ATTACH (2300)	M-011 Other inorganic materials	2.057	mg	supplier	GLUE	Silver (Ag)	7440-22-4		1.858	mg	903000	5184				
				supplier	GLUE	Bismaleimide monomer	Proprietary		0.197	mg	96000	551				
				supplier	GLUE	Silane	Proprietary		0.002	mg	1000	6				
BONDING WIRE (MKE 4N)	M-011 Other inorganic materials	4.418	mg	supplier	BONDING WIRE	Gold (Au)	7440-57-5		4.418	mg	1000000	12329				
SOLDERBALL (Sn98.5Ag0.1Cu0.5)	M-011 Other inorganic materials	35.598	mg	supplier	SOLDERBALL	Tin (Sn)	7440-31-5		35.064	mg	985000	97858				
				supplier	SOLDERBALL	Silver (Ag)	7440-22-4		0.356	mg	10000	993				
				supplier	SOLDERBALL	Copper (Cu)	7440-50-8		0.178	mg	5000	497				
ENCAPSULATION (GE-100LFC5)	M-011 Other inorganic materials	173.350	mg	supplier	MOLDING COMPOUND	Silica fused (SiO2)	60676-86-0		154.425	mg	900000	430978				
				supplier	MOLDING COMPOUND	Epoxy resin	Proprietary		8.517	mg	45000	23769				
				supplier	MOLDING COMPOUND	Phenol resin	Proprietary		7.570	mg	40000	21128				
				supplier	MOLDING COMPOUND	Metal Hydroxide	Proprietary		1.893	mg	10000	5282				
supplier	MOLDING COMPOUND	Carbon black	1333-86-4		0.946	mg	5000	2641								