



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 *	20-10-2017
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	
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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
STM32F103ZE7 STM32F103ZE7TR	S3X3*414XXXX	A	998Z	20-10-2017
	Amount	UoM	Unit type	ST ECOPACK Grade
	250.00	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	
Not Applicable; if coating is used or other bulk termination	NAC	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
FBGA	10x10x1.7	144		
Comment	Package : X3 LFBGA 10x10x1.7 144 F12x12 0.8 7163385			

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 : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	S3X3*414XXXX				5999998.0	1000000.0
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	19.486	mg	supplier	die	Silicon (Si)	7440-21-3		18.420	mg	945294	73680
				supplier	metallization	Aluminium (Al)	7429-90-5		0.072	mg	3695	288
				supplier	metallization	Copper (Cu)	7440-50-8		0.362	mg	18577	1448
				supplier	metallization	Cobalt (Co)	7440-48-4		0.067	mg	3438	268
				supplier	metallization	Titanium (Ti)	7440-32-6		0.020	mg	1026	80
				supplier	metallization	Tungsten (W)	7440-33-7		0.039	mg	2001	156
				supplier	Passivation	Silicon Nitride	12033-89-5		0.047	mg	2412	188
				supplier	Passivation	Silicon Oxide	7631-86-9		0.459	mg	23555	1836
				Supplier	Glass	Silica, amorphous, fused	60676-86-0		0.606	mg	482955	2424
Die Attach Epoxy_ABLEBOND 2025D	M-011 Other inorganic materials	1.255	mg	Supplier	Plastics/polymers	Bismaleimide Monomer	TS ref# 10049		0.392	mg	312500	1569
				Supplier	Plastics/polymers	Acrylate monomer	TS ref# 10050		0.107	mg	85227	428
				Supplier	Plastics/polymers	Epoxy resin	TS ref# 10042		0.107	mg	85227	428
				Supplier	Plastics/polymers	Acrylic resin	TS ref# 10051		0.043	mg	34091	171
Mold Compound_EME-G770LC_Sumitomo	M-011 Other inorganic materials	111.220	mg	Supplier	Plastics/polymers	Epoxy Resin A	Proprietary		2.228	mg	19836	8912
				Supplier	Plastics/polymers	Epoxy Resin B	Proprietary		2.228	mg	19836	8912
				Supplier	Plastics/polymers	Phenol Resin A	Proprietary		2.228	mg	19836	8912
				Supplier	Plastics/polymers	Phenol Resin B	Proprietary		2.228	mg	19836	8912
				Supplier	Plastics/polymers	Silica(Amorphous) A	60676-86-0		80.462	mg	726171	321847
				Supplier	Plastics/polymers	Silica(Amorphous) B	7631-86-9		19.003	mg	169180	76013
				Supplier	Plastics/polymers	Metal Hydroxide	Proprietary		2.228	mg	19836	8912
				Supplier	Additives	Carbon Black	1333-86-4		0.614	mg	5470	2458
Wire_Wire AU 20um R_MKE	Bonding Wire	1.011	mg	Supplier	Metals	Gold	7440-57-5		1.011	mg	1000000	4045
Solder Ball_96.5SN/3AG/0.5CU 0.4M	Metals	35.709	mg	Supplier	Metals	Tin	7440-31-5		34.459	mg	965000	137835
				Supplier	Metals	Silver	7440-22-4		1.071	mg	30000	4285
				Supplier	Metals	Copper	7440-50-8		0.179	mg	5000	714
Substrate_LFBGA 10X10 144LD 0.8P 2	M-011 Other inorganic materials	81.320	mg	Supplier	Soldermask	PAK resin (polyacrylate)	Proprietary		1.866	mg	22950	7465
				Supplier	Soldermask	Epoxy resin	Proprietary		1.015	mg	12481	4060
				Supplier	Soldermask	Phthalocyanine blue	147-14-8		0.016	mg	193	63
				Supplier	Soldermask	Organic pigment	Proprietary		0.016	mg	193	63
				Supplier	Soldermask	Barium sulfate	7727-43-7		2.072	mg	25481	8288
				Supplier	Soldermask	Talc containing no asbestiform fibers	14807-96-6		0.515	mg	6336	2061
				Supplier	Soldermask	Silica, amorphous Ⓜ	7631-86-9		0.049	mg	598	195
				Supplier	Soldermask	Antifoamer & Leveling agent	Proprietary		0.217	mg	2673	869
				Supplier	Core	Cured thermosetting resin (including inorganic)	65997-17-3		29.051	mg	357246	116205
				Supplier	Core	Continuous Filament Fiber Glass	Trade Secret		4.411	mg	54246	17645
				Supplier	Core	Copper Foil	7440-50-8		19.083	mg	234663	76331
				Supplier	Copper plating	Copper	7440-50-8		21.052	mg	258886	84210
				Supplier	Finishing	Nickel	7440-02-0		1.836	mg	22577	7344
				Supplier	Finishing	Gold	7440-57-5		0.120	mg	1477	480