



Materials Declaration Form

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

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2017-06-21
Contact Name *	Refer to Supplier comment section	Contact Title	Refer to Supplier comment section
Authorized Representative *	Rossana Bonaccorso	Representative Title	ADG 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 *	true	Legal Declaration * Standard

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
SPC58EC80C3QMC0Y	BHF6*FC80ABQ	A	MA1A	2017-06-21
	Amount	UoM	Unit type	ST ECOPACK Grade
	1035.0	mg	Each	ECOPACK® 2

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 (SACN38855)	Nickel/Gold (Ni/Au), electrolytic	other		

Package Designator	Size	Nbr of instances	Shape	
BGA	17 - 17 - 1.8	292	bulk solder	
Comment	Package: FPBGA 17X17X1.8 292 B0.5 P0.8			

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

Query : California Prop65 list, dated 21st October 2016			
Query			Response
1 - The product does not contain identified substance from California Prop 65 List, no exposure to consumers is foreseen			FALSE
2 - The product is containing below substance(s) from California Prop 65 List, no exposure to consumers is foreseen			TRUE
Substance	amount in product (mg)	Application	ppm in product
Nickel	3.96	Die / Substrate / Solder balls	3827
Lead	0.02	Solder balls	18

QueryList : REACH-12th January 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
2 - Product(s) does not contain REACH Substances Of Very High Concern in any Homogeneous Material above the limits per the definition within REACH				TRUE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Homogeneous Material (mg)	Application - Homogeneous Material	ppm in Homogeneous Material

Material Composition Declaration						Mfr Item Name	BHF6*FC80ABQ									
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)				
Die	Other inorganic materials	18.574	mg	supplier	die	Silicon (Si)	7440-21-3		17.445	mg	939216	16855				
				supplier	metallisation	Aluminium (Al)	7429-90-5		0.123	mg	6622	119				
				supplier	metallisation	Copper (Cu)	7440-50-8		0.386	mg	20782	373				
				supplier	metallisation	Nickel (Ni)	7440-02-0		0.002	mg	107	2				
				supplier	metallisation	Tantalum (Ta)	7440-25-7		0.065	mg	3500	63				
				supplier	metallisation	Titanium (Ti)	7440-32-6		0.011	mg	592	11				
				supplier	metallisation	Tungsten (W)	7440-33-7		0.002	mg	108	2				
				supplier	Passivation	Silicon Nitride (SiN)	12033-89-5		0.088	mg	4738	85				
				supplier	passivation	Silicon Oxide	7631-86-9		0.452	mg	24335	437				
				Substrate	Other Organic Materials	346.738	mg	supplier	core material	Barium sulfate	7727-43-7		20.839	mg	60100	20134
								supplier	core material	Acrylic resin	9003-01-4		32.333	mg	93249	31240
								supplier	core material	Epoxy resin	29690-82-2		25.432	mg	73346	24572
								supplier	core material	Biphenyl epoxy resin	85954-11-6		15.722	mg	45343	15190
								supplier	core material	Talc containing no asbestiform fibers	14807-96-6		12.138	mg	35006	11728
								supplier	core material	Methoxymethylethoxy propanol	34590-94-8		3.468	mg	10002	3351
								supplier	core material	Amorphous silica	7631-86-9		2.312	mg	6668	2234
								supplier	core material	3-methyl-methoxy-buthyl	103429-90-9		1.561	mg	4502	1508
supplier	core material	Silica Cristobalite	14464-46-1						1.156	mg	3334	1117				
supplier	core material	Copper Phthalocyanine	14302-13-7						0.035	mg	101	36				
supplier	core material	Morpholine derivative	Proprietary						0.578	mg	1667	558				
supplier	core material	Bromine	7726-95-6						0.009	mg	26	9				
supplier	core material	Chlorine	22537-15-1						0.017	mg	49	16				
supplier	prepreg	Fiber glass	65997-17-3						0.088	mg	254	85				
supplier	prepreg	Bismaleimide	105391-33-1						0.023	mg	66	22				
supplier	prepreg	Triazine (T)	25722-66-1						0.023	mg	66	22				
supplier	prepreg	Bisphenol F type epoxy resin	9003-36-5						0.015	mg	43	14				
supplier	prepreg	metal hydroxide	21645-51-2						0.002	mg	6	2				
supplier	prepreg	Calcium sulfate	7778-18-9						0.001	mg	3	1				
supplier	Solder mask	Barium sulfate	7727-43-7						3.126	mg	9015	3020				
supplier	Solder mask	Acrylic resin	9003-01-4						4.850	mg	13988	4686				
supplier	Solder mask	Epoxy resin	29690-82-2						3.815	mg	11003	3686				
supplier	Solder mask	Biphenyl epoxy resin	85954-11-6						2.358	mg	6801	2278				
supplier	Solder mask	Talc containing no asbestiform fibers	14807-96-6						1.821	mg	5250	1759				
supplier	Solder mask	Methoxymethylethoxy propanol	34590-94-8						0.520	mg	1500	502				
supplier	Solder mask	Amorphous silica	7631-86-9						0.347	mg	1001	335				
supplier	Solder mask	3-methyl-methoxy-buthyl	103429-90-9						0.234	mg	675	226				
supplier	Solder mask	Silica Cristobalite	14464-46-1						0.173	mg	499	167				
supplier	Solder mask	Copper Phthalocyanine	14302-13-7						0.005	mg	14	5				
supplier	Solder mask	Morpholine derivative	Proprietary						0.087	mg	251	84				
supplier	Solder mask	Bromine	7726-95-6						0.001	mg	3	1				
supplier	Solder mask	Chlorine	22537-15-1						0.003	mg	9	3				
supplier	metallisation	Copper (Cu)	7440-50-8						209.287	mg	603588	202210				
supplier	metallisation	Nickel (Ni)	7440-02-0		3.864	mg	11144	3733								
supplier	metallisation	Gold (Au)	7440-57-5		0.495	mg	1428	478								
Die attach	Other Organic Materials	2.455	mg	supplier	glue or tape	Silver (Ag)	7440-22-4		1.932	mg	786965	1867				
				supplier	glue or tape	Ditrimethylolpropane tetraacrylate	94108-97-1		0.442	mg	180041	427				
				supplier	glue or tape	2,6-Diglycidyl phenyl allyl ether	EC 417-470-1		0.074	mg	30143	71				
supplier	glue or tape	Mequinal	150-76-5		0.007	mg	2851	7								
Bonding wires	Other inorganic materials	1.658	mg	supplier	wire	Copper (Cu)	7440-50-8		1.625	mg	980097	1570				
				supplier	wire	Palladium (Pd)	7440-05-3		0.030	mg	18094	29				
supplier	wire	Silver (Ag)	7440-22-4		0.003	mg	1809	3								
Encapsulation	Other Organic Materials	474.797	mg	supplier	mold compound	Silica, vitreous	60676-86-0		386.959	mg	814999	373873				
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		47.480	mg	100001	45874				
				supplier	mold compound	Phenol resin	205830-20-2		23.740	mg	50000	22937				
				supplier	mold compound	Magnesium dihydroxide	1309-42-8		0.475	mg	1000	459				
				supplier	mold compound	Quartz	14808-60-7		11.870	mg	25000	11469				
supplier	mold compound	Carbon Black	1333-86-4		4.273	mg	9000	4129								
Solder balls	Solder	190.778	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		181.793	mg	952903	175645				
				supplier	solder alloy	Silver (Ag)	7440-22-4		7.250	mg	38002	7005				

			supplier	solder alloy	Copper (Cu)	7440-50-8		1.526	mg	7999	1474
			supplier	solder alloy	Nickel (Ni)	7440-02-0		0.095	mg	498	92
			supplier	solder alloy	Antimony (Sb)	7440-36-0		0.095	mg	498	92
			JIG - R	solder alloy	Lead (Pb)	7439-92-1		0.019	mg	100	18