



## 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>

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2020-02-04
<b>Company Unique ID</b>	NL 008751171B01		
<b>Contact Name *</b>	Refer to Supplier comment section	<b>Contact Title</b>	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>	Giovanni Giacopello	<b>Representative Title</b>	ADG Material Declaration 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

**Legal Statement**

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Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
SPC58EC80C3QMC0X	BFF6*FC80ABQ	A	1054	2020-02-04
Amount	UoM	Unit type	ST ECOPACK Grade	
1035.0	mg	Each	ECOPACK2	

  

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
3	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
SACN38855	Nickel/Gold (Ni/Au)	Copper Alloy		0

  

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



QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-March 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 : ELV directive : 2000/53/EC amended 2017/2096 _November 2017	
Query	Response
1 - Product(s) meets EU ELV requirement without any exemptions	TRUE
2 - Product(s) meets EU ELV requirements by application of the selected exemption(s)	FALSE
Exemption Id.	Description

QueryList : California Prop65 list, dated 3rd January 2020			
Query			Response
1 - The product does not contain identified substance from California Prop 65 List, no exposure to consumers is foreseen			TRUE
2 - The product is containing below substance(s) from California Prop 65 List, no exposure to consumers is foreseen			FALSE
Substance	amount in product (mg)	Application	ppm in product
Nickel	0.10	Die - Solder balls	94
Lead	0.02	Solder balls	18

QueryList : REACH-16th January 2020				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
4,4'-isopropylidenediphenol (bisphenol A; BPA)	1000 ppm	0.444	Substance embedded in substrate material	429
Lead	1000 ppm	0.019	Solder balls	18
2 - Product(s) does not contain REACH Substances Of Very High Concern in any Homogeneous Material above the limits per the definition within REACH				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Homogeneous Material (mg)	Application - Homogeneous Material	ppm in Homogeneous Material
4,4'-isopropylidenediphenol (bisphenol A; BPA)	1000 ppm	0.444	Substance embedded in substrate materials	1925
Lead	1000 ppm	0.019	Solder balls	102

Material Composition Declaration						Mfr Item Name	BFF6*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	M-011 Other inorganic materials	18.638	mg	supplier	die	Silicon (Si)	7440-21-3		17.445	mg	935991	16855				
				supplier	metallisation	Aluminium (Al)	7429-90-5		0.123	mg	6599	119				
				supplier	metallisation	Copper (Cu)	7440-50-8		0.386	mg	20710	373				
				supplier	metallisation	Nickel (Ni)	7440-02-0		0.002	mg	109	2				
				supplier	metallisation	Tantalum (Ta)	7440-25-7		0.065	mg	3487	63				
				supplier	metallisation	Titanium (Ti)	7440-32-6		0.011	mg	590	11				
				supplier	metallisation	Tungsten (W)	7440-33-7		0.002	mg	107	2				
				supplier	Passivation	Silicon Nitride (SiN)	12033-89-5		0.152	mg	8155	147				
				supplier	passivation	Silicon Oxide	7631-86-9		0.452	mg	24252	437				
				Substrate	M-015 Other organic materials	230.608	mg	supplier	core material	Fiber glass	65997-17-3		65.089	mg	282250	62888
								supplier	core material	Bisphenol F type epoxy resin	9003-36-5		36.243	mg	157163	35017
								supplier	core material	Bismaleimide (B)	105391-33-1		21.820	mg	94619	21082
								supplier	core material	Triazine (T)	25722-66-1		21.820	mg	94619	21082
								supplier	core material	metal hydroxide	21645-51-2		1.479	mg	6412	1429
								supplier	core material	Zinc hydroxyde	20427-58-1		0.296	mg	1284	286
supplier	core material	Calcium sulfate	7778-18-9						0.740	mg	3209	715				
SVHC	core material	BPA	80-05-7						0.444	mg	1925	429				
supplier	resin via fill	silica	7631-86-9						1.236	mg	5360	1194				
supplier	resin via fill	Diphenol Propane Diglycidyl Ether	110656-67-2						0.699	mg	3031	675				
supplier	resin via fill	Bisphenol F type epoxy resin	9003-36-5						0.350	mg	1518	338				
supplier	resin via fill	t-Butyl Phenyl; Glycidyl Ether	25722-66-1						0.023	mg	100	22				
supplier	resin via fill	Imidazole compound	Proprietary						0.023	mg	100	22				
supplier	Solder mask	Barium sulfate	7727-43-7						4.349	mg	18859	4202				
supplier	Solder mask	Bisphenol F type epoxy resin	9003-36-5						4.204	mg	18230	4062				
supplier	Solder mask	polymerized Biphenyl resin	85954-11-6						1.708	mg	7407	1650				
supplier	Solder mask	Talc containing no asbestiform fibers	14807-96-6						1.051	mg	4558	1015				
supplier	Solder mask	Methoxymethylethoxy propanol	34590-94-8						1.038	mg	4501	1003				
supplier	Solder mask	Amorphous silica	7631-86-9						0.788	mg	3417	761				
Die attach	M-015 Other organic materials	3.694	mg					supplier	metallisation	Copper (Cu)	7440-50-8		67.208	mg	291438	64935
				supplier	glue or tape	Silver (Ag)	7440-22-4		2.907	mg	786952	2809				
				supplier	glue or tape	Di(trimethylolpropane tetraacrylate)	94108-97-1		0.665	mg	180022	643				
				supplier	glue or tape	2,6-Diglycidyl phenyl allyl ether	EC 417-470-1		0.111	mg	30049	107				
				supplier	glue or tape	Mequinol	150-76-5		0.011	mg	2978	11				
Bonding wire	M-004 Copper and its alloys	1.126	mg	supplier	wire	Copper (Cu)	7440-50-8		1.104	mg	980462	1067				
				supplier	wire	Palladium (Pd)	7440-05-3		0.020	mg	17762	19				
				supplier	wire	Silver (Ag)	7440-22-4		0.002	mg	1776	2				
				Encapsulation	M-015 Other organic materials	593.819	mg	supplier	mold compound	Silica, vitreous	60676-86-0		483.962	mg	814999	467596
supplier	mold compound	Biphenyl epoxy resin	85954-11-6						59.382	mg	100000	57374				
supplier	mold compound	Phenol resin	205830-20-2						29.691	mg	50000	28687				
supplier	mold compound	Magnesium dihydroxide	1309-42-8						0.594	mg	1000	574				
supplier	mold compound	Quartz	14808-60-7						14.846	mg	25001	14344				
supplier	mold compound	Carbon Black	1333-86-4						5.344	mg	8999	5163				
Solder balls	Solder	187.115	mg					supplier	solder alloy	Tin (Sn)	7440-31-5		183.758	mg	982059	177544
				supplier	solder alloy	Silver (Ag)	7440-22-4		2.289	mg	12233	2212				
				supplier	solder alloy	Copper (Cu)	7440-50-8		0.954	mg	5098	922				
				supplier	solder alloy	Nickel (Ni)	7440-02-0		0.095	mg	508	92				
				JIG - R	solder alloy	Lead (Pb)	7439-92-1		0.019	mg	102	18				