



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 *	2017-06-20
Contact Name *	Refer to "Supplier Comment" section	Contact Title	Refer to "Supplier Comment" section
Contact Phone *	Refer to "Supplier Comment" section	Contact Email *	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

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.


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
	B9A4*FC80ABQ	A	MA1A	2017-06-20
Amount	UoM	Unit type	ST ECOPACK Grade	
2010.00	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	
NAC	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFP	24x24x1.4	176	flat	
Comment	Package: LQFP 176L 24X24X1.4 Exposed Pad. MDF valid for CPs: SPC58EC80E7QMC0Y - SPC58EC74E7P000X - SPC58EC74E7E0C0X SPC58EC80E7FMC0X			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 2015	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	true
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
Product(s) meets EU RoHS requirements by application of the selected exemption(s)	false
Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Product(s) is obsolete, no information is available	false
Product(s) is unknown, no information is available	false
Exemption Id.	Description

QueryList : REACH-12th January 2017				
Query				Response
The product 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	B9A4*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	46.137	mg	supplier	die	Silicon (Si)	7440-21-3		43.157	mg	935410	21471
				supplier	metallization	Aluminium (Al)	7429-90-5		0.064	mg	1387	32
				supplier	metallization	Copper (Cu)	7440-50-8		0.385	mg	8345	192
				supplier	metallization	Tantalum (Ta)	7440-25-7		2.125	mg	46058	1057
				supplier	metallization	Titanium (Ti)	7440-32-6		0.017	mg	368	8
				supplier	metallization	Tungsten (W)	7440-33-7		0.003	mg	65	1
				supplier	metallization	Nickel (Ni)	7440-02-0		0.001	mg	22	0
				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.087	mg	1886	43
				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.298	mg	6459	148
				supplier	alloy	Copper (Cu)	7440-50-8		518.955	mg	969993	258187
Leadframe	Copper & its alloys	535.009	mg	supplier	alloy	Iron (Fe)	7439-89-6		12.206	mg	22815	6073
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.735	mg	1374	366
				supplier	alloy	Zinc (Zn)	7440-66-6		0.639	mg	1194	318
				supplier	metallization	Nickel (Ni)	7440-02-0		2.268	mg	4239	1128
				supplier	metallization	Palladium (Pd)	7440-05-3		0.145	mg	271	72
				supplier	metallization	Gold (Au)	7440-57-5		0.061	mg	114	30
				supplier	glue	Bismaleimide resin	35325-39-4		0.246	mg	30037	123
				supplier	glue	Isobornyl Methacrylate	7534-94-3		0.614	mg	74969	305
Die attach	Other Organic Materials	8.190	mg	supplier	glue	Silver (Ag)	7440-22-4		7.330	mg	894994	3647
				supplier	wire	Copper (Cu)	7440-50-8		1.931	mg	1000000	961
Bonding wire	Other inorganic materials	1418.733	mg	supplier	mold compound	Epoxy Resin	25068-38-6		103.810	mg	73171	51647
				supplier	mold compound	Phenol Resin	29690-82-2		103.810	mg	73171	51647
				supplier	mold compound	Silica, vitreous	60676-86-0		1195.888	mg	842927	594969
				supplier	mold compound	Quartz	14808-60-7		4.152	mg	2927	2066
				supplier	mold compound	3-Mercaptopropyl trimethoxysilane	4420-74-0		6.921	mg	4877	3443
				supplier	mold compound	Carbon black	1333-86-4		4.152	mg	2927	2066
Encapsulation	Other Organic Materials	1418.733	mg	supplier	mold compound	Epoxy Resin	25068-38-6		103.810	mg	73171	51647
				supplier	mold compound	Phenol Resin	29690-82-2		103.810	mg	73171	51647