



Materials Declaration Form

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

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2018-07-02
Company Unique ID	NL 008751171801		
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 *	Floriana SAN BIAGIO	Representative Title	AMS 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
	1MRK*V667ABV	A	Z8SA	2018-07-02
Amount	UoM	Unit type	ST ECOPACK Grade	
283	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 (SAC125)	Not Applicable	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
BGA	12x12x1	324+49	bulk solder	
Comment	RK TFBGA 12x12x1.0 324+49 4R23 P.5; MDF valid for ST2100			

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-27th June 2018				
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	1MRK*V667ABV				5999999.0	999998.0				
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)				
Die	M-011 Other inorganic materials	8.676	mg	supplier	die	Silicon (Si)	7440-21-3		8.027	mg	925196	28364				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.045	mg	5187	159				
				supplier	metallization	Copper (Cu)	7440-50-8		0.272	mg	31351	961				
				supplier	passivation	Nickel (Ni)	7440-02-0		0.001	mg	115	4				
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.044	mg	5071	155				
				supplier	metallization	Titanium (Ti)	7440-32-6		0.012	mg	1383	42				
				supplier	metallization	Tungsten (W)	7440-33-7		0.002	mg	231	7				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.062	mg	7146	219				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.211	mg	24320	746				
				Substrate	M-004 Copper and its alloys	128.852	mg	supplier	Core	Copper Foil	7440-50-8		55.535	mg	430998	196237
								supplier	Core	Glass Cloth	65997-17-3		3.085	mg	23942	10901
								supplier	Core	Silica Vitreous	60676-86-0		0.617	mg	4788	2180
supplier	Core	Thermosetting resin	Proprietary						2.468	mg	19154	8721				
supplier	Soldermask	Barium sulfate	7727-43-7						5.105	mg	39619	18039				
supplier	Soldermask	Epoxy resin	9003-36-5						0.108	mg	838	382				
supplier	Soldermask	polymerized Biphenyl resin	85954-11-6						1.170	mg	9080	4134				
supplier	Soldermask	Talc containing no asbestiform fibers	14807-96-6						0.780	mg	6053	2756				
supplier	Soldermask	Methoxymethylethoxy propanol	34590-94-8						0.683	mg	5301	2413				
supplier	Soldermask	Amorphous silica	7631-86-9						0.585	mg	4540	2067				
supplier	Soldermask	Morpholine derivative	119313-12-1						0.012	mg	93	42				
supplier	Soldermask	Naphta	64742-94-5						0.108	mg	78	35				
supplier	metallization	Copper (Cu)	7440-50-8						54.988	mg	426753	194304				
supplier	metallization	Nickel (Ni)	7440-02-0						3.166	mg	24571	11187				
supplier	metallization	Gold (Au)	7440-57-5						0.540	mg	4191	1908				
Die attach	M-015 Other organic materials	1.297	mg	supplier	glue	Silver (Ag)	7440-22-4		1.193	mg	919815	4216				
				supplier	glue	Tetramethylene dimethacrylate	2082-81-7		0.104	mg	80185	367				
Bonding wires	M-011 Other inorganic materials	1.746	mg	supplier	wire	Copper (Cu)	7440-50-8		1.694	mg	970218	5986				
				supplier	wire	Palladium (Pd)	7440-05-3		0.049	mg	28064	173				
Encapsulation	M-015 Other organic materials	104.646	mg	supplier	wire	Gold (Au)	7440-57-5		0.003	mg	1718	11				
				supplier	molding compound	Epoxy Resin A	29690-82-2		8.372	mg	80003	29583				
				supplier	molding compound	Epoxy Resin B	25068-38-6		0.837	mg	7998	2958				
				supplier	molding compound	Phenol Resin	9003-35-4		2.093	mg	20001	7396				
				supplier	molding compound	Silical(Amorphous) A	60676-86-0		83.717	mg	800002	295820				
				supplier	molding compound	Silical(Amorphous) B	7631-86-9		5.232	mg	49997	18488				
Sodler Ball	M-011 Other inorganic materials	37.782	mg	supplier	molding compound	Metal Hydroxide	Proprietary		4.186	mg	40002	14792				
				supplier	molding compound	Carbon Black	1333-86-4		0.209	mg	1997	739				
				supplier	Solder ball	Tin (Sn)	7440-31-5		37.121	mg	982505	131170				
				supplier	Solder ball	Silver (Ag)	7440-22-4		0.453	mg	11990	1601				
				supplier	Solder ball	Copper (Cu)	7440-50-8		0.189	mg	5002	668				
				supplier	Solder ball	Nickel (Ni)	7440-02-0		0.019	mg	503	67				