



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 *	2018-08-21
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

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Legal Statement

Supplier Acceptance *	true	Legal Declaration *	Standard
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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
	FBE3*A247BCY	A	ZY1A	2018-08-21
Amount	UoM	Unit type	ST ECOPACK Grade	
23.71	mg	Each	ECOPACK® 3	
	Comment	ECOPACK® 3 is STMicroelectronics trade name for ROHS compliant device without use of any ROHS exemption and without Halogen nor Antimony		

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	3x3x0.86	8	gull wing	
Comment	E3 MSOP/TSSOP 8 BODY3.00 PITCH0.65; MDF valid for TSB7192IYST			

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	FBE3*A247BCY				5000001.0	999959.0
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	1.478	mg	supplier	die	Silicon (Si)	7440-21-3		1.478	mg	1000000	62337
Leadframe	M-004 Copper and its alloys	10.534	mg	supplier	alloy	Copper (Cu)	7440-50-8		9.868	mg	936776	416196
				supplier	alloy	Nickel (Ni)	7440-02-0		0.308	mg	29239	12990
				supplier	alloy	Silicon (Si)	7440-21-3		0.067	mg	6360	2826
				supplier	alloy	Magnesium (Mg)	7439-95-4		0.015	mg	1424	633
	M-006 Nickel and its alloys			supplier	metallization	Nickel (Ni)	7440-02-0		0.268	mg	25441	11303
	M-008 Precious metals			supplier	metallization	Palladium (Pd)	7440-05-3		0.004	mg	380	169
	M-008 Precious metals			supplier	metallization	Gold (Au)	7440-57-5		0.004	mg	380	169
Die attach	M-015 Other organic materials	0.427	mg	supplier	glue	Silver (Ag)	7440-22-4		0.321	mg	751756	13539
				supplier	glue	Reaction product: bisphenol-F-(epichlorhydrin)	9003-36-5		0.030	mg	70258	1265
				supplier	glue	Fatty acids, C18-unsatd., dimers, polymers with	68475-94-5		0.017	mg	39813	717
				supplier	glue	.gamma. Butyrolactone	96-48-0		0.017	mg	39813	717
				supplier	glue	Polyoxyalkylene amine	9046-10-0		0.017	mg	39813	717
				supplier	glue	Epoxy Resin	Proprietary		0.017	mg	39813	717
				supplier	glue	Copper Oxide	1317-38-0		0.004	mg	9368	169
				supplier	glue	Epoxy Resin Modifier	Proprietary		0.002	mg	4684	84
				supplier	glue	Substituted Silane	Proprietary		0.002	mg	4684	84
Bonding wires	M-008 Precious metals	0.122	mg	supplier	wire	Gold (Au)	7440-57-5		0.121	mg	991803	5103
				supplier	wire	Palladium (Pd)	7440-05-3		0.001	mg	8197	42
Encapsulation	M-015 Other organic materials	11.148	mg	supplier	molding compound	Epoxy Resin	Proprietary		0.892	mg	80014	37621
				supplier	molding compound	Silica Amorphous A (SiO2)	60676-86-0		7.803	mg	699946	329102
				supplier	molding compound	Silica Amorphous B (SiO2)	7631-86-9		1.672	mg	149982	70519
				supplier	molding compound	Phenol Resin	205830-20-2		0.719	mg	64496	30325
				supplier	molding compound	Other Bismuth Compounds	Proprietary		0.006	mg	538	253
				supplier	molding compound	Carbon black	1333-86-4		0.056	mg	5023	2362