



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 *	2017-10-31
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	AMG 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
	A2DC*MV7YABA	A	ZW1A	2017-10-31
Amount	UoM	Unit type	ST ECOPACK Grade	
23.8	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	
Not Applicable	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
LGA	4x3x1	4	flat	
Comment	Package: A089 HCLGA 4MM X 3 MM X 1.00 MM MICRO; MDF valid for MP34DT05TR-A			

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-7th July 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

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	A2DC*MV7YABA				8000002.0	999999.0
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
dies	M-011 Other inorganic materials	2.021	mg	supplier	die	Silicon (Si)	7440-21-3		1.962	mg	970807	82437
				supplier	metallization	Aluminium (Al)	7429-90-5		0.002	mg	990	84
				supplier	metallization	Copper (Cu)	7440-50-8		0.009	mg	4453	378
				supplier	metallization	Gold (Au)	7440-57-5		0.001	mg	495	42
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.002	mg	990	84
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	495	42
				supplier	Passivation	Silicon Nitride	12033-89-5		0.014	mg	6927	588
				supplier	Passivation	Silicon Oxide	7631-86-9		0.030	mg	14844	1261
				supplier	core material	Glass Cloth	65997-17-3		0.401	mg	59293	16849
				supplier	core material	Silica vitreous	60676-86-0		0.033	mg	4879	1387
Substrate	M-015 Other organic materials	6.763	mg	supplier	core material	Thermosetting resin and other filler	Proprietary		0.084	mg	12421	3529
				supplier	core material	Copper foil (Cu)	7440-50-8		4.845	mg	716398	203571
				supplier	soldermask	Solvent naphtha(petroleum),heavy aromatic	64742-94-5		0.002	mg	296	84
				supplier	soldermask	Napthalene	91-20-3		0.002	mg	296	84
				supplier	soldermask	Phosphinonide derivative	Proprietary		0.062	mg	9168	2605
				supplier	soldermask	Talc containing no asbestiform fibers	14807-96-6		0.008	mg	1183	336
				supplier	soldermask	Barium sulfate	7727-43-7		0.070	mg	10350	2941
				supplier	soldermask	Dipropylene glycol monomethyl ether	34590-94-8		0.046	mg	6802	1933
				supplier	metallization	Copper (Cu)	7440-50-8		0.843	mg	124649	35420
				supplier	metallization	Nickel (Ni)	7440-02-0		0.335	mg	49534	14076
Substrate 2	M-015 Other organic materials	6.596	mg	supplier	metallization	Palladium (Pd)	7440-05-3		0.016	mg	2366	672
				supplier	metallization	Gold (Au)	7440-57-5		0.016	mg	2366	672
				supplier	core material	Glass Cloth	65997-17-3		0.396	mg	60036	16639
				supplier	core material	Silica vitreous	60676-86-0		0.033	mg	5003	1387
				supplier	core material	Thermosetting resin and other filler	Proprietary		0.082	mg	12432	3445
				supplier	core material	Copper foil (Cu)	7440-50-8		4.755	mg	720891	199790
				supplier	soldermask	Solvent naphtha(petroleum),heavy aromatic	64742-94-5		0.005	mg	758	210
				supplier	soldermask	Napthalene	91-20-3		0.002	mg	303	84
				supplier	soldermask	Phosphinonide derivative	Proprietary		0.006	mg	910	252
				supplier	soldermask	Talc containing no asbestiform fibers	14807-96-6		0.033	mg	5003	1387
Substrate 3	M-015 Other organic materials	6.559	mg	supplier	soldermask	Barium sulfate	7727-43-7		0.095	mg	14403	3992
				supplier	soldermask	Dipropylene glycol monomethyl ether	34590-94-8		0.045	mg	6822	1891
				supplier	metallization	Copper (Cu)	7440-50-8		0.800	mg	121286	33613
				supplier	metallization	Nickel (Ni)	7440-02-0		0.318	mg	48211	13361
				supplier	metallization	Palladium (Pd)	7440-05-3		0.013	mg	1971	546
				supplier	metallization	Gold (Au)	7440-57-5		0.013	mg	1971	546
				supplier	core	Glass Cloth	65997-17-3		0.392	mg	59765	16471
				supplier	core	Silica vitreous	60676-86-0		0.032	mg	4879	1345
				supplier	core	Thermosetting resin and other filler	Proprietary		0.081	mg	12349	3403
				supplier	core	Copper foil (Cu)	7440-50-8		4.696	mg	715963	197311
Die attach 1	M-015 Other organic materials	0.171	mg	supplier	soldermask	Solvent naphtha(petroleum),heavy aromatic	64742-94-5		0.005	mg	762	210
				supplier	soldermask	Napthalene	91-20-3		0.002	mg	305	84
				supplier	soldermask	Phosphinonide derivative	Proprietary		0.006	mg	915	252
				supplier	soldermask	Talc containing no asbestiform fibers	14807-96-6		0.033	mg	5031	1387
				supplier	soldermask	Barium sulfate	7727-43-7		0.094	mg	14331	3950
				supplier	soldermask	Dipropylene glycol monomethyl ether	34590-94-8		0.044	mg	6708	1849
				supplier	metallization	Copper (Cu)	7440-50-8		0.830	mg	126544	34874
				supplier	metallization	Nickel (Ni)	7440-02-0		0.314	mg	47873	13193
				supplier	metallization	Palladium (Pd)	7440-05-3		0.015	mg	2287	630
				supplier	metallization	Gold (Au)	7440-57-5		0.015	mg	2287	630
Die attach 2	M-015 Other organic materials	0.108	mg	supplier	glue	Treated silica	Proprietary		0.017	mg	99415	714
				supplier	glue	Silica vitreous	60676-86-0		0.128	mg	748538	5378
				supplier	glue	Dimethyl siloxane reaction with silica	67762-90-7		0.025	mg	146199	1050
				supplier	glue	Quartz	14808-60-7		0.001	mg	5848	42
				supplier	glue	Silica, amorphous, treated	68999-20-6		0.068	mg	629630	2857
supplier	glue	Bismaleimide monomer	35325-39-4		0.005	mg	46296	210				
supplier	glue	Silicon dioxide	7631-86-9		0.030	mg	277778	1261				
supplier	glue	Acrylate monomer	Proprietary		0.002	mg	18519	84				
supplier	glue	Epoxy resin	29690-82-2		0.002	mg	18519	84				

				supplier	glue	Additive	Proprietary		0.001	mg	9259	42
Bonding wires	M-008 Precious metals	0.084	mg	supplier	wire	Gold (Au)	7440-57-5		0.084	mg	1000000	3529
Soder Paste	M-011 Other inorganic materials	1.498	mg	supplier	adhesive	Tin (Sn)	7440-31-5		1.449	mg	967290	60882
				supplier	adhesive	Copper (Cu)	7440-50-8		0.007	mg	4673	294
				supplier	adhesive	Silver (Ag)	7440-22-4		0.042	mg	28037	1765