



## 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>	2017-10-02
<b>Company Unique ID</b>	NL 008751171801		
<b>Contact Name *</b>	Refer to Supplier Comment section		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>	Floriana SAN BIAGIO	<b>Representative Title</b>	AMG MD 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
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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
	9BZ7*MV5HBL5	A	ZY1A	2017-10-02
Amount	UoM	Unit type	ST ECOPACK Grade	
500	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	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	12.8x7.5x2.5	20	gull wing	
Comment	Package: Z7 SO 20 .30 TO JEDEC MS-013; MDF valid for STNRG011			

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	9BZ7*MVSH8L5				6999998.0	1000066.0
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	8.459	mg	supplier	die	Silicon (Si)	7440-21-3		8.039	mg	950349	16078
				supplier	metallization	Aluminium (Al)	7429-90-5		0.036	mg	4256	72
				supplier	metallization	Copper (Cu)	7440-50-8		0.175	mg	20688	350
				supplier	metallization	Titanium (Ti)	7440-32-6		0.002	mg	236	4
				supplier	metallization	Tungsten (W)	7440-33-7		0.027	mg	3192	54
				supplier	Passivation	Silicon Nitride	12033-89-5		0.015	mg	1773	30
				supplier	Passivation	Silicon Oxide	7631-86-9		0.145	mg	17142	290
				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.002	mg	236	4
				supplier	back side metallization	Gold (Au)	7440-57-5		0.006	mg	709	12
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.011	mg	1300	22
				supplier	back side metallization	Vanadium (V)	7440-62-2		0.001	mg	118	2
				supplier	alloy	Copper (Cu)	7440-50-8		127.072	mg	971625	254144
				Leadframe	M-004 Copper and its alloys	130.783	mg	supplier	alloy	Iron (Fe)	7439-89-6	
supplier	alloy	Phosphorus (P)	7723-14-0						0.039	mg	298	78
supplier	alloy	Zinc (Zn)	7440-66-6						0.156	mg	1193	312
supplier	metallization	Silver (Ag)	7440-22-4						0.386	mg	2951	772
supplier	glue	Quartz (SiO2)	14808-60-7						0.296	mg	550186	592
Die attach	M-015 Other organic materials	0.538	mg	supplier	glue	Epoxy Resin	29690-82-2		0.048	mg	89219	96
				supplier	glue	1,4-Bis(2,3-epoxypropoxy)butane	2425-79-8		0.097	mg	180297	194
				supplier	glue	Aromatic Amine	Proprietary		0.005	mg	9294	10
				supplier	glue	Reaction Product Bisphenol F; epoxy resin	9003-36-5		0.075	mg	139405	150
				supplier	glue	Glass, Oxide, Chemicals	65997-17-03		0.016	mg	29740	32
				supplier	glue	Reaction Product Bisphenol A type liquid epoxy	25068-38-6		0.001	mg	1859	2
Die attach 2	M-015 Other organic materials	1.228	mg	supplier	glue	Silver (Ag)	7440-22-4		0.934	mg	760586	1868
				supplier	glue	Reaction product: bisphenol-F-(epichlorhydrin)	9003-36-5		0.086	mg	70033	172
				supplier	glue	Fatty acids, C18-unsatd., dimers, polymers with	68475-94-5		0.049	mg	39902	98
				supplier	glue	gamma. Butyrolactone	96-48-0		0.049	mg	39902	98
				supplier	glue	Polyoxyalkylene amine	9046-10-0		0.049	mg	39902	98
				supplier	glue	Epoxy Resin	29690-82-2		0.049	mg	39902	98
				supplier	glue	Epoxy Resin Modifier	Proprietary		0.006	mg	4886	12
				supplier	glue	Substituted Silane	Proprietary		0.006	mg	4886	12
Bonding wires	M-011 Other inorganic materials	0.233	mg	supplier	wire	Copper (Cu)	7440-50-8		0.227	mg	974249	454
				supplier	wire	Palladium (Pd)	7440-05-3		0.006	mg	25751	12
Encapsulation	M-011 Other inorganic materials	355.410	mg	supplier	mold compound	Epoxy Resin	29690-82-2		30.210	mg	85000	60420
				supplier	mold compound	Phenol Resin	205830-20-2		14.216	mg	39999	28432
				supplier	mold compound	Silica Amorphous A	60676-86-0		280.774	mg	790000	561548
				supplier	mold compound	Silica Amorphous B	7631-86-9		28.433	mg	80001	56866
				supplier	mold compound	Carbon Black	1333-86-4		1.777	mg	5000	3554
connections coating	Solder	3.382	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		3.382	mg	1000000	6764