



## Materials Declaration Form


<b>IPC Form Type *</b>	<b>1752 Distribute</b>	<b>Version</b>	<b>2</b>
<b>Sectionals *</b>	<b>Material Info Manufacturing Info</b>	<b>Subsectionals *</b>	<b>A-D</b>

\* : Required Field

Supplier Information			
<b>Company Name *</b>	<b>STMicroelectronics</b>	<b>Response Date *</b>	<b>2018-07-11</b>
<b>Company Unique ID</b>	<b>NL 008751171B01</b>		
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Contact Phone *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Authorized Representative *</b>	<b>MDG MD CHAMPION</b>	<b>Representative Title</b>	<b>MDG MD CHAMPION</b>
<b>Representative Phone *</b>	Refer to Supplier Comment section		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>	<b>true</b>
<b>Legal Declaration *</b>	<b>Standard</b>
<b>Legal Statement</b>	<p>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.</p>

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
ST72F321AR9T6 ST72F321AR9T6TR	XG5W*813XXX3	A	959	2018-07-11
	Amount	UoM	Unit type	ST ECOPACK Grade
	350.00	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	
NAC	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFP	10x10x1.4	64	L Bend	
Comment	Package : 5W LQFP 64 10x10x1.4 1 0051434			

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 :						Mfr Item Name	XG5W*813XXX3				6000000.0	1031318.0
note : Substance present with less 0.001mg will not be declared in this document												
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die or dies	M-011 Other inorganic materials	17.645	mg	supplier	die	Silicon (Si)	7440-21-3		17.225	mg	976197	49214
				supplier	metallization	Copper (Cu)	7440-50-8		0.343	mg	19439	980
				supplier	metallization	Titanium (Ti)	7440-32-6		0.013	mg	737	37
				supplier	Passivation	Silicon Nitride	12033-89-5		0.016	mg	907	46
				supplier	Passivation	Silicon Oxide	7631-86-9		0.048	mg	2720	137
Lead-frame	M-011 Other inorganic materials	95.854	mg	supplier	alloy	Copper (Cu)	7440-50-8		91.280	mg	952284	260799
				supplier	alloy	Nickel (Ni)	7440-02-0		2.847	mg	29697	8133
				supplier	alloy	Silicium (Si)	7440-21-3		0.617	mg	6434	1762
				supplier	alloy	Magnesium (Mg)	7439-95-4		0.142	mg	1485	407
				supplier	coating	Nickel (Ni)	7440-02-0		0.888	mg	9259	2536
				supplier	coating	Palladium (Pd)	7440-05-3		0.057	mg	593	162
				supplier	coating	Gold (Au)	7440-57-5		0.024	mg	247	68
Die Attach	M-011 Other inorganic materials	3.074	mg	supplier	glue or soft solder	Silver (Ag)	7440-22-4		2.367	mg	770000	6763
				supplier	glue or soft solder	Epoxy Cresol Novolak	29690-82-2		0.695	mg	226000	1985
				supplier	glue or soft solder	1-isopropyl-2,2-dimethyltrimethylene diisobut	6846-50-0		0.012	mg	4000	35
Wires	M-011 Other inorganic materials	1.084	mg	supplier	Bonding wire	Gold (Au)	7440-57-5		1.084	mg	1000000	3098
Encapsulation	M-011 Other inorganic materials	232.336	mg	supplier	Moulding Compound	Silica, vitreous	60676-86-0		202.080	mg	875641	608691
				supplier	Moulding Compound	Epoxy resin	Proprietary		17.456	mg	71746	49873
				supplier	Moulding Compound	Phenol resin	Proprietary		12.103	mg	49744	34579
				supplier	Moulding Compound	Carbon Black	1333-86-4		0.698	mg	2870	1995
Finishing	M-011 Other inorganic materials	0.007	mg	supplier	connections coating	Nickel (Ni)	7440-02-0		0.006	mg	916800	17
				supplier	connections coating	Palladium (Pd)	7440-05-3		0.000	mg	58700	1
				supplier	connections coating	Gold (Au)	7440-57-5		0.000	mg	24500	0