



## Materials Declaration Form

<b>IPC</b>	<b>1752</b>	<b>Version</b>	<b>2</b>
<b>Form Type *</b>	<b>Distribute</b>		
<b>Sectionals *</b>	<b>Material Info</b> <b>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>2018-02-06</b>
<b>Contact Name *</b>	Refer to Supplier Comment section	<b>Contact Email *</b>	Refer to Supplier Comment section
<b>Contact Phone *</b>	Refer to Supplier Comment section	<b>Authorized Representative *</b>	Refer to Supplier Comment section
<b>Authorized Representative *</b>	<b>Rossana Bonaccorso</b>	<b>Representative Title</b>	<b>ADG MD CHAMPION</b>
<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>	<b>true</b>	<b>Legal Declaration *</b>	<b>Standard</b>
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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
Z0402MF 1AA2	SHTR*Z1G046R	A	Z45A	2018-02-06
	Amount	UoM	Unit type	ST ECOPACK Grade
	866.48	mg	Each	ECOPACK® 2

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
Not Applicable	Not Applicable	Not Applicable		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	9.77X7.3X4.5	3	Through-hole	
Comment	Package: TO 202-3			

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	FALSE
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)	TRUE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption Id.	Description
7a	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)
7c-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound

QueryList : California Prop65 list, dated 15th December 2017			
Query			Response
1 - The product does not contain identified substance from California Prop 65 List, no exposure to consumers is foreseen			FALSE
2 - The product is containing below substance(s) from California Prop 65 List, no exposure to consumers is foreseen			TRUE
Substance	amount in product (mg)	Application	ppm in product
Nickel	3.00	Die / Leadframe	3458
Lead	0.86	Soft solder	989
Lead-Borate Glass	0.26	Die glass coating	294

QueryList : REACH-15th January 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
2 - Product(s) does not contain REACH Substances Of Very High Concern in any Embedded article nor Homogeneous Material above the limits per the definition within REACH				true
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	SHTR*21G046R					
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	1.592	mg	supplier	die	Silicon (Si)	7440-21-3		1.249	mg	784548	1441
				supplier	metallization	Aluminium (Al)	7429-90-5		0.043	mg	27010	50
				supplier	metallization	Gold (Au)	7440-57-5		0.005	mg	3140	5
				supplier	passivation	Nickel (Ni)	7440-02-0		0.008	mg	5025	9
				supplier	Passivation	Silicon Oxide	7631-86-9		0.012	mg	7538	14
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.007	mg	4397	8
				supplier	back side metallization	Gold (Au)	7440-57-5		0.002	mg	1256	2
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.011	mg	6910	13
Leadframe	Copper & its alloys	258.757	mg	JIG - R & California 65	glass coating	Lead-Borate Glass	65997-18-4	7c-I-Electrical and e	0.255	mg	160176	294
				supplier	alloy	Copper (Cu)	7440-50-8		255.428	mg	987135	294787
				supplier	alloy	Iron (Fe)	7439-89-6		0.256	mg	989	295
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.076	mg	294	88
				supplier	metallization	Nickel (Ni)	7440-02-0		2.977	mg	11505	3436
Die Attach	Solder	0.629	mg	JIG R	metallization	Phosphorus (P)	12185-10-3		0.020	mg	77	23
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	0.602	mg	957075	695
				supplier	solder	Silver (Ag)	7440-22-4		0.015	mg	23847	17
Bonding wire	Other inorganic materials	0.141	mg	supplier	solder	Tin (Sn)	7440-31-5		0.012	mg	19078	14
				supplier	wire	Aluminum (Al)	7440-90-5		0.141	mg	1000000	163
Encapsulation	Other Organic Materials	605.082	mg	supplier	mold compound	Silica	14808-60-7		456.093	mg	753771	526372
				supplier	mold compound	Epoxy Resin	25068-38-6		94.288	mg	155827	108817
				supplier	mold compound	Phenol Resin	9003-35-4		51.660	mg	85377	59620
				supplier	mold compound	Carbon Black	1333-86-4		3.041	mg	5025	3510
Connections coating	Solder	0.283	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.283	mg	1000000	327