



## 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  * : Required Field

<b>Supplier Information</b>			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2017-07-10
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Authorized Representative *</b>	Giuseppe Vitali Palma	<b>Representative Title</b>	ADG 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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<b>Legal Statement</b>			
<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>	Standard

**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
SMTPA320	8HZG*CWB320M	A	64BA	2017-07-10
Amount	UoM	Unit type	ST ECOPACK Grade	
98.00	mg	Each	ECOPACK2	

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	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SOJ	4.2-3.7-2.37	2	J bend	
Comment	SMB CLIP (SOD 6)			

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)

Query : California Prop65 list, dated 27th January 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	0.07	Die back side metal - Leadframe metal	745
Lead	1.09	Soft solder	11102

QueryList : REACH-12th January 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	8HZG*CW8320M					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	Other inorganic materials	1.049	mg	supplier	die	Silicon (Si)	7440-21-3		1.004	mg	957102	10245
				supplier	metallization	Aluminium (Al)	7429-90-5		0.004	mg	3813	41
				supplier	Passivation	Silicon Oxide	7631-86-9		0.005	mg	4765	51
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.009	mg	8580	92
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.009	mg	8580	92
				supplier	back side metallization	Gold (Au)	7440-57-5		0.009	mg	8580	92
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.009	mg	8580	92
				supplier	alloy	Copper (Cu)	7440-50-8		40.623	mg	997006	414520
				supplier	alloy	Iron (Fe)	7439-89-6		0.041	mg	1005	418
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.012	mg	295	122
Leadframe	Copper & its alloys	40.745	mg	supplier	metallization	Nickel (Ni)	7440-02-0		0.064	mg	1571	653
				supplier	metallization	Phosphorus (P)	12185-10-3		0.005	mg	123	51
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high met	1.088	mg	920474	11102
				supplier	solder	Silver (Ag)	7440-22-4		0.029	mg	24535	296
				supplier	solder	Tin (Sn)	7440-31-5		0.059	mg	49915	602
				supplier	solder	Flux residue	Proprietary		0.006	mg	5076	61
Encapsulation	Other Organic Materials	35.883	mg	supplier	mold compound	Amorphous Silica	7631-86-9		26.231	mg	730974	267660
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		6.818	mg	189996	69565
				supplier	mold compound	Phenol resin	9003-35-4		1.075	mg	30011	10985
				supplier	mold compound	Bisphenol A-bisphenol A diglycidyle ether poly	25036-25-3		1.077	mg	30013	10985
				supplier	mold compound	Carbon black	1333-86-4		0.323	mg	9001	3295
				supplier	mold compound	Triphenylphophine	603-35-0		0.251	mg	6995	2561
				supplier	mold compound	3-Mercaptopropyl trimethoxysilane	4420-74-0		0.108	mg	3010	1102
				supplier	solder alloy	Tin (Sn)	7440-31-5		0.811	mg	1000000	8276
Connections coating	Solder	0.811	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.811	mg	1000000	8276
Clip	Copper & its alloys	18.330	mg	supplier	alloy	Copper (Cu)	7440-50-8		18.330	mg	1000000	187041