



## 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>2018-12-04</b>
<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>	Giovanni Giacopello	<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
	HHZI*TWU039D	A	ZA41	2018-12-04
Amount	UoM	Unit type	ST ECOPACK Grade	
98	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
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SOJ	3X3X0.9	2	J bend	
Comment	Package: SMB CLIP (SOD 6 NEW) - MDF valid for CPs: SMBJ33A-TR and SM6T39A			

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)

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	0.01	Die	102
Lead	3.05	Soft solder	31092

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

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	HHZJ*TWU039D					
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	1.774	mg	supplier	die	Silicon (Si)	7440-21-3		1.573	mg	886697	16051
				supplier	metallization	Aluminium (Al)	7429-90-5		0.169	mg	95265	1724
				supplier	Passivation	Silicon Oxide	7631-86-9		0.014	mg	7892	143
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.006	mg	3382	61
				supplier	back side metallization	Gold (Au)	7440-57-5		0.002	mg	1127	20
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.010	mg	5637	102
Leadframe & Clip	Copper and its alloy	39.118	mg	Supplier	Alloy	Copper (Cu)	7440-50-8		39.098	mg	999489	398959
				Supplier	Alloy	Zinc (Zn)	7440-66-6		0.002	mg	51	20
				Supplier	Alloy	Iron (Fe)	7439-89-6		0.004	mg	102	41
				Supplier	Alloy	Phosphorus (P)	12185-10-3		0.014	mg	358	143
Die attach	Other organic material	3.294	mg	Supplier	soft solder	Silver (Ag)	7440-22-4		0.082	mg	24894	837
				Supplier	soft solder	Tin (Sn)	7440-31-5		0.165	mg	50091	1684
				Supplier	soft solder	Lead (Pb)	7439-92-1	7a-Lead in high me	3.047	mg	925015	31092
Encapsulation	Other organic material	52.081	mg	Supplier	Molding Compound	silica fused	7631-86-9		38.540	mg	740001	393265
				Supplier	Molding Compound	silica quartz	14808-60-7		10.415	mg	199977	106276
				Supplier	Molding Compound	phenolic resin	9003-35-4		2.605	mg	50018	26582
				Supplier	Molding Compound	carbon black	1333-86-4		0.521	mg	10004	5316
Finishing	Other inorganic material	1.733	mg	Supplier	connection coating	Tin (Sn)	7440-31-5		1.733	mg	1000000	17684