



## 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>	2018-04-19
<b>Company Unique ID</b>	NL 008751171B01		
<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>	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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Legal Statement		
<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
TDA7715LV	HA5W*A229BA6	A	0959	2018-04-19
	Amount	UoM	Unit type	ST ECOPACK Grade
	350	mg	Each	ECOPACK2
	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	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFP	10-10-1.4	64	gull wing	
Comment	LQFP 64 10x10x1.4 1			

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 : ELV directive : 2000/53/EC amended 2016/774 _May 2016	
Query	Response
1 - Product(s) meets EU ELV requirements without any exemptions	TRUE
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	FALSE
Exemption Id.	Description

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			TRUE
2 - The product is containing below substance(s) from California Prop 65 List, no exposure to consumers is foreseen			FALSE
Substance	amount in product (mg)	Application	ppm in product

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	HASW*A2298A6					
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	13.945	mg	supplier	die	Silicon (Si)	7440-21-3		13.770	mg	987451	39377
				supplier	metallization	Aluminium (Al)	7429-90-5		0.036	mg	2582	103
				supplier	metallization	Copper (Cu)	7440-50-8		0.001	mg	71	3
				supplier	metallization	Titanium (Ti)	7440-32-6		0.015	mg	1076	43
				supplier	Passivation	Silicon Nitride	12033-89-5		0.027	mg	1936	77
				supplier	Passivation	Silicon Oxide	7631-86-9		0.096	mg	6884	275
Leadframe	M-004 Copper and its alloys	121.227	mg	supplier	alloy	Copper (Cu)	7440-50-8		118.603	mg	978355	339156
				supplier	alloy	Iron (Fe)	7439-89-6		0.119	mg	981	340
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.036	mg	297	103
				supplier	metallization	Silver (Ag)	7440-22-4		2.469	mg	20367	7060
				supplier	glue	Silver (Ag)	7440-22-4		3.316	mg	904775	9482
Die attach	M-011 Other inorganic materials	3.665	mg	supplier	glue	Isobornyl Methacrylate	7534-94-3		0.202	mg	55116	578
				supplier	glue	Bismaleimide resin	Proprietary		0.147	mg	40109	420
				supplier	wire	Gold (Au)	7440-57-5		2.253	mg	1000000	6443
Bonding wires	M-008 Precious metals	2.253	mg	supplier	wire	Gold (Au)	7440-57-5		2.253	mg	1000000	6443
Encapsulation	M-011 Other inorganic materials	204.788	mg	supplier	mold compound	Silica, vitreous	60676-86-0		176.938	mg	864006	505971
				supplier	mold compound	Epoxy Resin	25068-38-6		15.359	mg	75000	43921
				supplier	mold compound	Phenol Resin	29690-82-2		10.239	mg	49998	29279
				supplier	mold compound	3-Mercaptopropyl trimethoxysilane	4420-74-0		1.024	mg	5000	2928
				supplier	mold compound	Quartz	14808-60-7		0.614	mg	2998	1756
				supplier	mold compound	Carbon black	1333-86-4		0.614	mg	2998	1756
connections coating	Solder	3.822	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		3.822	mg	1000000	10929