



## Materials Declaration Form

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

\*: Required Field

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2018-06-28
<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>	Rossana Bonaccorso	<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
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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
STPS3045CG-TR	HWD2*F54S02Y	A	994X	2018-06-28
	Amount	UoM	Unit type	ST ECOPACK Grade
	1380.00	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
1	245	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10.2-9.15-4.5	2	gull wing	
Comment	D2PAK			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-March 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 : ELV directive : 2000/53/EC amended 2017/2096 _November 2017			
Query			Response
1 - Product(s) meets EU ELV requirements without any exemptions			FALSE
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)			TRUE
Exemption Id.	Description		
8e	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)		

QueryList : California Prop65 list, dated 25th May 2018			
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	0.98	Die - Leadframe	711
Lead	8.94	Soft solder	6475

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	HWD2*F54502Y					
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	10.664	mg	supplier	die	Silicon (Si)	7440-21-3		10.099	mg	947018	7318
				supplier	metallization	Aluminium (Al)	7429-90-5		0.418	mg	39197	303
				supplier	metallization	Nickel (Ni)	7440-02-0		0.046	mg	4314	33
				supplier	metallization	Titanium (Ti)	7440-32-6		0.009	mg	843	7
				supplier	metallization	Tungsten (W)	7440-33-7		0.015	mg	1407	11
				supplier	Passivation	Silicon Oxide	7631-86-9		0.062	mg	5814	42
Leadframe	M-004 Copper and its alloys	779.485	mg	supplier	back side metallization	Gold (Au)	7440-57-5		0.015	mg	1407	11
				supplier	alloy	Copper (Cu)	7440-50-8		777.537	mg	997501	563433
				supplier	alloy	Iron (Fe)	7439-89-6		0.779	mg	999	564
Soft solder	Solder	9.357	mg	supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.234	mg	300	170
				supplier	metallization	Nickel (Ni)	7440-02-0		0.935	mg	1200	678
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	8.936	mg	955007	6475
				supplier	solder	Silver (Ag)	7440-22-4		0.234	mg	25008	170
Bonding wires	M-011 Other inorganic materials	5.144	mg	supplier	solder	Tin (Sn)	7440-31-5		0.187	mg	19985	136
				supplier	wire	Aluminium (Al)	7429-90-5		5.144	mg	1000000	3728
Encapsulation	M-011 Other inorganic materials	572.861	mg	supplier	mold compound	Silica, vitreous	60676-86-0		514.143	mg	897500	372567
				supplier	mold compound	Epoxy resin	25068-38-6		40.100	mg	70000	29058
				supplier	mold compound	Phenol resin	29690-82-2		17.186	mg	30000	12454
				supplier	mold compound	carbon black	1333-86-4		1.432	mg	2500	1038
Connections coating	Solder	2.489	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		2.489	mg	1000000	1804