



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D * : Required Field

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2018-10-23
Company Unique ID	NL 008751171801		
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Authorized Representative *	Rossana Bonaccorso	Representative Title	ADG MD CHAMPION
Representative Phone *	Refer to Supplier Comment section	Representative Email *	Refer to Supplier Comment section
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/web/en/support/support.html		

Uncertainty Statement


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Legal Statement			
Supplier Acceptance *	true	Legal Declaration *	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
STPSC4H065DLF	HWCH*3D921T7	A	Z4XT	2018-10-23
	Amount	UoM	Unit type	ST ECOPACK Grade
	170.00	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	
SOT	8.0,8.0,0.8	4	flat	
Comment	Package: Power FLAT MLPD 8x8 4L			

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	0.02	Die	100
Lead	9.30	Soft solder	54718

QueryList : REACH-27th June 2018				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Lead	1000 ppm	9.30	Soft solder	54718
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				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material
Lead	1000 ppm	9.30	Soft solder	954933

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	HWCH*3D921T7					
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	1.114	mg	supplier	die	Silicium carbide	409-21-2		1.053	mg	945242	6194
				supplier	metallization	Aluminium (Al)	7429-90-5		0.012	mg	10772	71
				supplier	metallization	Gold (Au)	7440-57-5		0.002	mg	1795	12
				supplier	passivation	Nickel (Ni)	7440-02-0		0.009	mg	8079	53
				supplier	metallization	Silver (Ag)	7440-22-4		0.020	mg	17953	118
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	898	6
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.001	mg	898	6
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.008	mg	7181	47
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.003	mg	2693	18
				supplier	polymer die coating	PIXI Gamma-butyrolactone	96-48-0		0.005	mg	4489	29
Leadframe	Copper & its alloys	79.408	mg	supplier	alloy	Copper (Cu)	7440-50-8		76.704	mg	965948	451200
				supplier	alloy	Iron (Fe)	7439-89-6		1.790	mg	22542	10529
				supplier	alloy	Phosphorus (P)	12185-10-3		0.020	mg	252	118
				supplier	alloy	Zinc (Zn)	7440-66-6		0.100	mg	1259	587
				supplier	metallization	Silver (Ag)	7440-22-4		0.794	mg	9999	4671
Soft solder	Solder	9.741	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	9.302	mg	954933	54718
				supplier	solder	Silver (Ag)	7440-22-4		0.244	mg	25049	1435
				supplier	solder	Tin (Sn)	7440-31-5		0.195	mg	20018	1147
Bonding wire	Other inorganic materials	0.436	mg	supplier	wire	Copper (Cu)	7440-50-8		0.436	mg	1000000	2565
Encapsulation	Other Organic Materials	74.702	mg	supplier	mold compound	Silica Fused	60676-86-0		69.998	mg	937030	411753
				supplier	mold compound	Epoxy Resin	25068-38-6		2.240	mg	29986	13176
				supplier	mold compound	Phenol resin	29690-82-2		2.240	mg	29986	13176
				supplier	mold compound	Carbon Black	1333-86-4		0.224	mg	2998	1318
Connection coating	Solder	4.599	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		4.599	mg	1000000	27053