



Materials Declaration Form

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

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2019-10-21
Company Unique ID	NL 008751171B01		
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 *	Giovanni Giacobello	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
STPSC10065DLF	HWCH*4L051T7	A	Z4XA	2019-10-21
	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	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 2017/2096 _November 2017	
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 13th September 2019			
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
Nickel	0.03	Die	194
Lead	9.26	Soft solder	54476

QueryList : REACH-16th July 2019				
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	5.47	Soft solder	32182
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	5.47	Soft solder	954939

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	HWCH*4L0517					
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	2.110	mg	supplier	die	Silicium carbide	409-21-2		1.999	mg	947393	11759
				supplier	metallization	Aluminium (Al)	7429-90-5		0.022	mg	10427	130
				supplier	metallization	Gold (Au)	7440-57-5		0.003	mg	1422	18
				supplier	passivation	Nickel (Ni)	7440-02-0		0.018	mg	8531	106
				supplier	metallization	Silver (Ag)	7440-22-4		0.038	mg	18009	224
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	474	6
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.001	mg	474	6
				supplier	back side metallization	Gold (Au)	7440-57-5		0.003	mg	1422	18
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.015	mg	7109	88
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.010	mg	4739	59
				supplier	alloy	Copper (Cu)	7440-50-8		76.370	mg	965926	449235
				supplier	alloy	Iron (Fe)	7439-89-6		1.783	mg	22551	10488
				supplier	alloy	Phosphorus (P)	12185-10-3		0.020	mg	253	118
Leadframe	Copper & its alloys	79.064	mg	supplier	alloy	Zinc (Zn)	7440-66-6		0.100	mg	1265	588
				supplier	metallization	Silver (Ag)	7440-22-4		0.791	mg	10005	4653
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	9.261	mg	954939	54476
				supplier	solder	Silver (Ag)	7440-22-4		0.243	mg	25057	1429
				supplier	solder	Tin (Sn)	7440-31-5		0.194	mg	20004	1141
Bonding wire	Other inorganic materials	0.434	mg	supplier	wire	Copper (Cu)	7440-50-8		0.434	mg	1000000	2553
Encapsulation	Other Organic Materials	74.115	mg	supplier	mold compound	Silica Fused	60676-86-0		69.447	mg	937017	408512
				supplier	mold compound	Epoxy Resin	Proprietary		2.223	mg	29994	13076
				supplier	mold compound	Phenol resin	Proprietary		2.223	mg	29994	13076
				supplier	mold compound	Carbon Black	1333-86-4		0.222	mg	2995	1306
Connection coating	Solder	4.579	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		4.579	mg	1000000	26935