



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 *	2018-12-14
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 Giapello	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
A2C50S65M2-F	PC45*KLF7CTY	A	995Y	2018-12-14
	Amount	UoM	Unit type	ST ECOPACK Grade
	42400	mg	Each	ECOPACK® 3
Comment	ECOPACK® 3 is STMicroelectronics trade name for ROHS compliant device without use of any ROHS exemption and without Halogen nor Antimony			

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
Not Applicable	Not Applicable	Not Applicable		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Not Applicable	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
Mounted BOARD	57 - 48 - 11	33	pin	
Comment	Package: ACEPACK 2			

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 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	210.97	Die - NTC - Housing	4976

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				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	PCAS*KL7CTY					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Dies	M-011 Other inorganic materials	143.028	mg	supplier	die	Silicon (Si)	7440-21-3		133.125	mg	930762	3140
				supplier	metallization	Aluminium (Al)	7429-90-5		5.973	mg	41760	140
				supplier	Passivation	Silicon Nitride	12033-89-5		0.797	mg	5572	19
				supplier	Passivation	Silicon Oxide	7631-86-9		2.665	mg	18633	63
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.025	mg	175	1
				supplier	back side metallization	Gold (Au)	7440-57-5		0.041	mg	287	1
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.333	mg	2328	8
				supplier	back side metallization	Vanadium (V)	7440-62-2		0.011	mg	77	0
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.058	mg	406	1
				DBC	M-004 Copper and its alloys	12950.361	mg	supplier	Ceramic	Alumina	1344-28-1	
supplier	metallization	Copper (Cu)	7440-50-8						10114.649	mg	781032	238553
NTC		9.245	mg	supplier	Ceramics	Manganese oxide	1313-13-9		3.179	mg	343862	75
				supplier	Ceramics	Nickel oxide	1313-99-1		1.467	mg	158680	35
				supplier	Ceramics	Iron(III) oxide	1309-37-1		1.549	mg	167550	37
				supplier	Ceramics	Cobalt oxide (Co3O4)	1308-06-1		1.549	mg	167550	37
				supplier	Ceramics	Aluminium oxide	1344-28-1		0.408	mg	44133	9
				supplier	metallization	Nickel (Ni)	7440-02-0		0.060	mg	6490	1
				supplier	metallization	Tin (Sn)	7440-31-5		0.180	mg	19470	4
				supplier	metallization	Palladium (Pd)	7440-05-3		0.199	mg	21525	5
				supplier	metallization	Silver (Ag)	7440-22-4		0.618	mg	66847	15
							SVHC	Glass	boron trioxide, bor	1303-86-2		0.009
			supplier	Glass	silicon dioxide	7631-86-9		0.027	mg	2920	1	
Pin Holder	M-004 Copper and its alloys	370.062	mg	supplier	alloy	Copper (Cu)	7440-50-8		347.858	mg	939999	8204
				supplier	alloy	Tin (Sn)	7440-31-5		22.204	mg	60001	524
Pin	M-004 Copper and its alloys	1374.028	mg	supplier	alloy	Copper (Cu)	7440-50-8		1291.586	mg	940000	30462
				supplier	alloy	Tin (Sn)	7440-31-5		82.442	mg	60000	1944
Die attach	Solder	1.857	mg	supplier	glue or tape	Silicone adhesive	proprietary		1.857	mg	1000000	44
Soft solder	Solder	31.253	mg	supplier	solder	Tin (Sn)	7440-31-5		30.156	mg	964899	711
				supplier	solder	Silver (Ag)	7440-22-4		1.094	mg	35005	26
				SVHC	solder	Lead (Pb)	7439-92-1		0.003	mg	96	0
Bonding wires	M-003 Aluminum and its alloys	223.243	mg	supplier	wire	Aluminium (Al)	7429-90-5		223.243	mg	1000000	5265
Underfill	M-015 Other organic materials	6196.348	mg	supplier	resin	silicon gel A	proprietary		3098.174	mg	500000	73070
				supplier	resin	silicon gel B	proprietary		3098.174	mg	500000	73070
Housing	M-011 Other inorganic materials	21100.575	mg	supplier	case	Polyethylene terephthalate	25038-59-9		18486.162	mg	876098	435994
				supplier	case	Iron (Fe)	7439-89-6		1856.466	mg	87982	43785
				supplier	case	Chromium (Cr)	7440-47-3		470.552	mg	22300	11098
				supplier	case	Nickel (Ni)	7440-02-0		209.111	mg	9910	4932
				supplier	case	Manganese (Mn)	7439-96-5		49.587	mg	2350	1170
				supplier	case	Silicium (Si)	7440-21-3		26.165	mg	1240	616
				supplier	case	Carbon (C)	7440-44-0		2.532	mg	120	60