



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 *	2018-11-28
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
A1C15S12M3	SC44*KLJFCTY	A	Z5YA	2018-11-28
	Amount	UoM	Unit type	ST ECOPACK Grade
	24730	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	48 - 35 - 10	23	pin	
Comment	ACEPACK 1			

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	132.22	Die - NTC - Housing	5346

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	SC44**KLJFCTY					
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	136.288	mg	supplier	die	Silicon (Si)	7440-21-3		128.768	mg	944824	5207
				supplier	metallization	Aluminium (Al)	7429-90-5		2.589	mg	18997	105
				supplier	Passivation	Silicon Nitride	12033-89-5		0.417	mg	3060	17
				supplier	Passivation	Silicon Oxide	7631-86-9		3.116	mg	22863	126
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.014	mg	103	1
				supplier	back side metallization	Gold (Au)	7440-57-5		0.023	mg	169	1
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.182	mg	1335	7
				supplier	back side metallization	Vanadium (V)	7440-62-2		0.006	mg	44	0
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.031	mg	227	1
				supplier	polymer die coating	Probimide	Proprietary		1.142	mg	8378	46
DBC	M-010 Ceramics / glass	8491.935	mg	supplier	Ceramic	Alumina	1344-28-1		1856.867	mg	218662	75084
				supplier	metallization	Copper (Cu)	7440-50-8		6633.123	mg	781109	268218
				supplier	metallization	Iron Phosphide (FeP)	26508-33-8		0.267	mg	32	11
				supplier	metallization	Zinc (Zn)	7440-66-6		0.232	mg	27	9
				supplier	metallization	Silver (Ag)	7440-22-4		1.446	mg	170	58
NTC	M-010 Ceramics / glass	9.245	mg	supplier	Ceramics	Manganese oxide	1313-13-9		3.179	mg	343862	129
				supplier	Ceramics	Nickel oxide	1313-99-1		1.467	mg	158680	61
				supplier	Ceramics	Iron(III) oxide	1309-37-1		1.549	mg	167550	63
				supplier	Ceramics	Cobalt oxide (Co3O4)	1308-06-1		1.549	mg	167550	63
				supplier	Ceramics	Aluminium oxide	1344-28-1		0.408	mg	44132	16
				supplier	metallization	Nickel (Ni)	7440-02-0		0.060	mg	6491	2
				supplier	metallization	Tin (Sn)	7440-31-5		0.180	mg	19470	7
				supplier	metallization	Palladium (Pd)	7440-05-3		0.199	mg	21525	8
				supplier	metallization	Silver (Ag)	7440-22-4		0.618	mg	66847	25
				SVHC	Glass	diboron trioxide; bor	1303-86-2		0.009	mg	973	0
supplier	Glass	silicon dioxide	7631-86-9		0.027	mg	2920	1				
Pin holder	M-004 Copper and its alloys	257.922	mg	supplier	alloy	Copper (Cu)	7440-50-8		242.447	mg	940001	9804
				supplier	alloy	Tin (Sn)	7440-31-5		15.475	mg	59999	626
Pin	M-011 Other inorganic materials	957.656	mg	supplier	alloy	Copper (Cu)	7440-50-8		900.197	mg	940000	36400
				supplier	alloy	Tin (Sn)	7440-31-5		57.459	mg	60000	2323
Soft solder	Solder	17.196	mg	supplier	solder	Tin (Sn)	7440-31-5		16.592	mg	964876	671
				supplier	solder	Silver (Ag)	7440-22-4		0.516	mg	30007	21
				supplier	solder	Copper (Cu)	7440-50-8		0.086	mg	5001	3
				SVHC	solder	Lead (Pb)	7439-92-1		0.002	mg	116	0
Bonding wires	M-011 Other inorganic materials	191.204	mg	supplier	wire	Aluminium (Al)	7429-90-5		191.204	mg	1000000	7732
Underfill	M-015 Other organic materials	1499.700	mg	supplier	resin	silicon gel A	proprietary		749.850	mg	500000	30321
				supplier	resin	silicon gel B	proprietary		749.850	mg	500000	30321
Housing	M-011 Other inorganic materials	13165.003	mg	supplier	plastic	Polyethylene terephthalate	25038-59-9		11533.653	mg	876084	466376
				supplier	metallization	Iron (Fe)	7439-89-6		1158.258	mg	87980	46835
				supplier	metallization	Chromium (Cr)	7440-47-3		293.643	mg	22305	11874
				supplier	metallization	Nickel (Ni)	7440-02-0		130.508	mg	9913	5277
				supplier	metallization	Manganese (Mn)	7439-96-5		30.996	mg	2354	1253
				supplier	metallization	Silicium (Si)	7440-21-3		16.314	mg	1239	660
				supplier	metallization	Carbon (C)	7440-44-0		1.631	mg	125	66
				supplier	solder alloy	Tin (Sn)	7440-31-5		4.233	mg	1000000	171