



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 *	2018-06-19
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
SCT10N120AG	T46J*K12EAV2	A	3068	2018-06-19
	Amount	UoM	Unit type	ST ECOPACK Grade
	5380	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
Not Applicable	Not Applicable	Not Applicable		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	15.45 - 19.85 - 5.15	3	Through-hole	
Comment	Package: HIP-247 IN LINE HEAT SINK 2MM			

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
8a	Lead in solders to attach electrical and electronic components to electronic circuit boards and lead in finishes on terminations of components other than electrolyte aluminium capacitors, on component pins and on electronic circuit boards

QueryList : California Prop65 list, dated 29th December 2017			
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	11.98	Die - Leadframe	2228
Lead	2.23	Soft solder	414

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
-	-			0
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
-	-	0.00		

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	T46J*K12EAV2					
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	2.208	mg	supplier	die	Silicium carbide	409-21-2		2.086	mg	944746	388
				supplier	metallization	Aluminium (Al)	7429-90-5		0.047	mg	21286	9
				supplier	Passivation	Silicon Nitride	12033-89-5		0.011	mg	4983	2
				supplier	Passivation	Silicon Oxide	7631-86-9		0.017	mg	7699	3
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.001	mg	453	0
				supplier	back side metallization	Gold (Au)	7440-57-5		0.003	mg	1359	1
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.016	mg	7246	3
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.027	mg	12228	5
Leadframe	M-004 Copper and its alloys	4116.279	mg	supplier	alloy	Copper (Cu)	7440-50-8		4098.902	mg	995778	761874
				supplier	alloy	Iron (Fe)	7439-89-6		4.104	mg	997	763
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		1.231	mg	299	229
				supplier	metallization	Nickel (Ni)	7440-02-0		11.968	mg	2907	2225
				supplier	metallization	Phosphorus (P)	7723-14-0		0.074	mg	19	14
Soft solder	Solder	2.330	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	2.225	mg	954936	414
				supplier	solder	Silver (Ag)	7440-22-4		0.058	mg	24893	11
				supplier	solder	Tin (Sn)	7440-31-5		0.047	mg	20171	9
Bonding wires	M-003 Aluminum and its alloys	6.926	mg	supplier	wire	Aluminium (Al)	7429-90-5		6.926	mg	1000000	1287
Encapsulation	M-011 Other inorganic materials	1243.396	mg	supplier	mold compound	Silica, vitreous	60676-86-0		973.579	mg	783000	180963
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		186.509	mg	150000	34667
				supplier	mold compound	Phenol resin	9003-35-4		62.170	mg	50000	11556
				supplier	mold compound	Triphenylphosphine	603-35-0		9.947	mg	8000	1849
				supplier	mold compound	Bismuth compound	7440-69-9		4.974	mg	4000	925
connections coating	Solder	8.861	mg	supplier	solder alloy	Carbon Black	1333-86-4		6.217	mg	5000	1156
						Tin (Sn)	7440-31-5		8.861	mg	1000000	1647