



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 *	2019-03-22
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
SCTW40N120G2VAG	T46J*SQK9AV2	A	3068	2019-03-22
	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	15.6 - 20 - 5	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
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 26th October 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	12.01	Die - Leadframe	2232
Lead	5.05	Soft solder	939

QueryList : REACH-15th January 2019				
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	T461*SQ9AV2					
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	5.248	mg	supplier	die	Silicium carbide	409-21-2		4.960	mg	945122	922
				supplier	metallization	Aluminium (Al)	7429-90-5		0.111	mg	21151	21
				supplier	Passivation	Silicon Nitride	12033-89-5		0.026	mg	4954	5
				supplier	Passivation	Silicon Oxide	7631-86-9		0.039	mg	7431	7
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.003	mg	572	1
				supplier	back side metallization	Gold (Au)	7440-57-5		0.008	mg	1524	1
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.038	mg	7241	7
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.063	mg	12005	12
Leadframe	M-004 Copper and its alloys	4112.580	mg	supplier	alloy	Copper (Cu)	7440-50-8		4095.207	mg	995776	761191
				supplier	alloy	Iron (Fe)	7439-89-6		4.101	mg	997	762
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		1.230	mg	299	229
				supplier	metallization	Nickel (Ni)	7440-02-0		11.968	mg	2910	2225
				supplier	metallization	Phosphorus (P)	7723-14-0		0.074	mg	18	14
Soft solder	Solder	5.290	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	5.052	mg	955009	939
				supplier	solder	Silver (Ag)	7440-22-4		0.132	mg	24953	25
				supplier	solder	Tin (Sn)	7440-31-5		0.106	mg	20038	20
Bonding wires	M-003 Aluminum and its alloys	5.746	mg	supplier	wire	Aluminium (Al)	7429-90-5		5.745	mg	999826	1066
				supplier	wire	Magnesium (Mg)	7439-95-4		0.001	mg	174	0
Encapsulation	M-011 Other inorganic materials	1242.275	mg	supplier	mold compound	Silica, vitreous	60676-86-0		972.702	mg	783000	180800
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		186.341	mg	150000	34636
				supplier	mold compound	Phenol resin	9003-35-4		62.114	mg	50000	11545
				supplier	mold compound	Triphenylphosphine	603-35-0		9.938	mg	8000	1847
				supplier	mold compound	Bismuth compound	7440-69-9		4.969	mg	4000	924
				supplier	mold compound	Carbon Black	1333-86-4		6.211	mg	5000	1154
connections coating	Solder	8.861	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		8.861	mg	1000000	1647