



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 *	2018-07-05
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 Giacopello	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
STH2N120K5-2AG	T1(9*VJN1A52	A	3068	2018-07-05
	Amount	UoM	Unit type	ST ECOPACK Grade
	1380.00	mg	Each	ECOPACK® 1
	Comment	ECOPACK® or ECOPACK® 1 is STMicroelectronics trade name for ROHS compliant devices		

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
1	245	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10.2-7.2-4.5	3	GULL WING	
Comment	H2PAK HC 2-3 Leads			

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)

California 65 list			
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	0.24	Die - Leadframe	173
Lead	3.53	Soft solder	2556
Antimony trioxide	6.25	Encapsulation	4529

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	T1(9*VIN1A52					
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	3.845	mg	supplier	die	Silicon (Si)	7440-21-3		3.711	mg	965150	2689
				supplier	metallization	Aluminium (Al)	7429-90-5		0.052	mg	13524	38
				supplier	Passivation	Silicon Nitride	12033-89-5		0.018	mg	4681	13
				supplier	Passivation	Silicon Oxide	7631-86-9		0.028	mg	7282	20
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.002	mg	520	1
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.025	mg	6502	18
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.009	mg	2341	7
Leadframe	M-004 Copper and its alloys	848.010	mg	supplier	alloy	Copper (Cu)	7440-50-8		846.677	mg	998428	613534
				supplier	alloy	Iron (Fe)	7439-89-6		0.848	mg	1000	614
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.254	mg	300	184
				supplier	metallization	Nickel (Ni)	7440-02-0		0.214	mg	252	155
				supplier	metallization	Phosphorus (P)	7723-14-0		0.017	mg	20	12
Soft solder	Solder	3.693	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	3.527	mg	955050	2556
				supplier	solder	Silver (Ag)	7440-22-4		0.092	mg	24912	67
				supplier	solder	Tin (Sn)	7440-31-5		0.074	mg	20038	54
Bonding wires	M-003 Aluminum and its alloys	0.154	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.153	mg	993506	111
				supplier	wire	Magnesium (Mg)	7439-95-4		0.001	mg	6494	1
Encapsulation	M-011 Other inorganic materials	520.564	mg	supplier	mold compound	Silica, vitreous	60676-86-0		419.574	mg	805999	304039
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		36.439	mg	70000	26400
				supplier	mold compound	Phenol resin	9003-35-4		20.823	mg	40001	15089
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		31.234	mg	60000	22633
				supplier	mold compound	Antimony Trioxide	1309-64-4		6.247	mg	12000	4527
				supplier	mold compound	Brominated Epoxy Resin	40039-93-8		3.644	mg	7000	2641
connections coating	Solder	3.734	mg	supplier	mold compound	Carbon black	1333-86-4		2.603	mg	5000	1886
				supplier	solder alloy	Tin (Sn)	7440-31-5		3.734	mg	1000000	2706