



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 *	2019-06-24
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


While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.

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
STD12NF06LAG	TMDP*AL6AA62	A	3068	2019-06-24
	Amount	UoM	Unit type	ST ECOPACK Grade
	330.00	mg	Each	ECOPACK1
	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	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	6.5-6.1-2.3	3	GULL WING	
Comment	TO 252 DPAK			

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 23rd November 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	0.10	Die - Leadframe	309
Lead	1.51	Soft solder	4579

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				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Lead	1000 ppm	1.51	Soft solder	4579
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				FALSE
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	TMDP*AL6AA62					
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	1.554	mg	supplier	die	Silicon (Si)	7440-21-3		1.469	mg	945302	4452
				supplier	metallization	Aluminium (Al)	7429-90-5		0.052	mg	33462	158
				supplier	metallization	Titanium (Ti)	7440-32-6		0.010	mg	6435	30
				supplier	metallization	Tungsten (W)	7440-33-7		0.002	mg	1287	6
				supplier	Passivation	Silicon Oxide	7631-86-9		0.006	mg	3861	18
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.001	mg	644	3
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.010	mg	6435	30
Leadframe	M-004 Copper and its alloys	165.043	mg	supplier	back side metallization	Silver (Ag)	7440-22-4		0.004	mg	2574	12
				supplier	alloy	Copper (Cu)	7440-50-8		164.152	mg	994601	497430
				supplier	alloy	CopperPhosphorous (CuP)	12517-41-8		0.330	mg	1999	1000
				supplier	alloy	Cobalt (Co)	7440-48-4		0.462	mg	2799	1400
				supplier	metallization	Nickel (Ni)	7440-02-0		0.092	mg	559	279
				supplier	metallization	Phosphorus (P)	7723-14-0		0.007	mg	42	21
				supplier	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	1.511	mg	954517
Soft solder	Solder	1.583	mg	supplier	solder	Silver (Ag)	7440-22-4		0.040	mg	25368	121
				supplier	solder	Tin (Sn)	7440-31-5		0.032	mg	20215	97
				supplier	wire	Aluminium (Al)	7429-90-5		0.456	mg	995633	1380
Bonding wires	M-003 Aluminum and its alloys	0.458	mg	supplier	wire	Magnesium (Mg)	7439-95-4		0.002	mg	4367	6
				supplier	mold compound	Silica, vitreous	60676-86-0		129.216	mg	805998	391564
Encapsulation	M-011 Other inorganic materials	160.318	mg	supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		11.222	mg	69998	34006
				supplier	mold compound	Phenol resin	9003-35-4		6.413	mg	40002	19433
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		9.619	mg	60000	29148
				supplier	mold compound	Antimony Trioxide	1309-64-4		1.924	mg	12000	5830
				supplier	mold compound	Brominated Epoxy Resin	40039-93-8		1.122	mg	6999	3400
				supplier	mold compound	Carbon black	1333-86-4		0.802	mg	5003	2430
				supplier	solder alloy	Tin (Sn)	7440-31-5		1.045	mg	1000000	3167
connections coating	Solder	1.045	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		1.045	mg	1000000	3167