



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D <small>* : Required Field</small>

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2019-05-08
Company Unique ID	NL 008751171B01		
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Giovanni Giacopello	Representative Title	ADG MD CHAMPION
Representative Phone *	Refer to Supplier Comment section		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
STF16N60M6	VSP* BQ63B62	A	3068	2019-05-08
	Amount	UoM	Unit type	ST ECOPACK Grade
	1900	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
3	260	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10.2-16.15-4.5	3	Through-hole	
Comment	TO 220 ISO FULL PACK IN LINE			

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 8th March 2019			
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	9.13	Die - Leadframe	4806
Lead	3.62	Soft solder	1906

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	3.62	Soft solder	1906
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
Lead	1000 ppm	3.62	Soft solder	954917

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	VSPF*BQ63862					
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	7.177	mg	supplier	die	Silicon(Si)	7440-21-3		6.622	mg	922670	3485
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.123	mg	17138	65
				supplier	metallisation	Copper(Cu)	7440-50-8		0.046	mg	6408	24
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.316	mg	44030	166
				supplier	metallisation	Silver(Ag)	7440-22-4		0.032	mg	4459	17
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.008	mg	1115	4
				supplier	Passivation	Silicon Nitride (SiN)	12033-89-5		0.028	mg	3901	15
				supplier	passivation	Silicon Oxide	7631-86-9		0.002	mg	279	1
Leadframe	M-004 Copper and its alloys	614.126	mg	supplier	alloy & coating	Copper (Cu)	7440-50-8		604.468	mg	984274	318141
				supplier	alloy & coating	Nickel (Ni)	7440-02-0		8.816	mg	14355	4640
				supplier	alloy & coating	Iron (Fe)	7439-89-6		0.605	mg	985	318
				supplier	alloy & coating	Iron Phosphide (FeP)	26508-33-8		0.182	mg	296	96
				supplier	alloy & coating	Phosphorus metal	7723-14-0		0.055	mg	90	29
				supplier	alloy & coating	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	3.622	mg	954917	1906
Soft solder	Solder	3.793	mg	SVHC	solder	Silver(Ag)	7440-22-4		0.095	mg	25046	50
				supplier	solder	Tin(Sn)	7440-31-5		0.076	mg	20037	40
				supplier	wire	Aluminium (Al)	7429-90-5		0.669	mg	1000000	354
Bonding wires	M-003 Aluminum and its alloys	0.669	mg	supplier	mold compound	Quartz	14808-60-7		887.857	mg	700000	467293
				supplier	mold compound	Silica vitreous	60676-86-0		95.128	mg	75000	50067
				supplier	mold compound	Epoxy resin	proprietary		177.572	mg	140000	93459
				supplier	mold compound	phenol resin	proprietary		88.786	mg	70000	46729
				supplier	mold compound	Metal hydroxide	proprietary		12.684	mg	10000	6676
				supplier	mold compound	Carbon black	1333-86-4		6.342	mg	5000	3338
connections coating	Solder	5.866	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		5.866	mg	1000000	3087