



## Materials Declaration Form

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

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2019-08-14
<b>Company Unique ID</b>	NL 008751171B01		
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Contact Phone *</b>	Refer to Supplier Comment section	<b>Contact Email *</b>	Refer to Supplier Comment section
<b>Authorized Representative *</b>	Giovanni Giapello	<b>Representative Title</b>	ADG MD CHAMPION
<b>Representative Phone *</b>	Refer to Supplier Comment section	<b>Representative Email *</b>	Refer to Supplier Comment section
<b>Supplier Comment</b>	Online Technical Support - STMicroelectronics : <a href="http://www.st.com/web/en/support/support.html">http://www.st.com/web/en/support/support.html</a>		

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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
STB50N65DM6	XLD2*PQFLB62	A	SHENZHEN B/E	2019-08-14
	Amount	UoM	Unit type	ST ECOPACK Grade
	1380	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	
Not Applicable	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy	DM00508769	

Package Designator	Size	Nbr of instances	Shape	
SIP	10,2,9,15,4,5	2	gull wing	
Comment	D2PAK			

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 28th June 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	1.19	Die - Leadframe	862
Lead	11.72	Soft solder	8490
Antimony trioxide	6.79	Encapsulation	4920

QueryList : REACH-16th July 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	11.72	Soft solder	8490
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	11.716	Soft solder	955005

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	XLD2*PQFL862					
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	18.121	mg	supplier	die	Silicon(Si)	7440-21-3		16.216	mg	894873	11751
					metallisation	Aluminium(Al)	7429-90-5		0.423	mg	23343	307
					metallisation	Copper(Cu)	7440-50-8		0.156	mg	8610	110
					metallisation	Nickel(Ni)	7440-02-0		1.084	mg	59820	786
					metallisation	Silver(Ag)	7440-22-4		0.110	mg	6070	80
					metallisation	Titanium(Ti)	7440-32-6		0.027	mg	1490	20
					Passivation	Silicon nitride(SiN)	12033-89-5		0.097	mg	5353	70
					passivation	Silicon oxide	7631-86-9		0.008	mg	441	6
					Leadframe	M-004 Copper and its alloys	778.660	mg	supplier	alloy & coating	Copper(Cu)	7440-50-8
alloy & coating	Nickel(Ni)	7440-02-0		0.105						mg	135	76
alloy & coating	Iron(Fe)	7439-89-6		0.358						mg	460	259
alloy & coating	Iron Phosphide(Fe <sup>3</sup> P)	26508-33-8		0.654						mg	840	474
alloy & coating	Phosphorus metal	7723-14-0		0.011						mg	14	8
Soft solder	Solder	12.268	mg	SVHC						solder	lead(Pb)	7439-92-1
					solder	Silver(Ag)	7440-22-4		0.307	mg	25024	222
					solder	Tin(Sn)	7440-31-5		0.245	mg	19971	178
					wire	Aluminium (Al)	7429-90-5		2.894	mg	1000000	2097
Bonding wires	M-003 Aluminum and its alloys	2.894	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.131	mg	992424	95
Bonding wires 2	M-003 Aluminum and its alloys	0.132	mg	supplier	wire	Magnesium (Mg)	7439-95-4		0.001	mg	7576	1
Encapsulation	M-011 Other inorganic materials	565.436	mg	supplier	mold compound	Silica vitreous	60676-86-0		465.354	mg	823000	337213
					mold compound	Epoxy Cresol Novolac	29690-82-2		39.581	mg	70001	26882
					mold compound	Phenol resin	9003-35-4		22.617	mg	39999	16389
					mold compound	Biphenyl epoxy resin	85954-11-6		16.963	mg	30000	12292
					mold compound	Antimony trioxide	1309-64-4		6.785	mg	12000	4917
					mold compound	Brominated epoxy resin	40039-93-8		11.309	mg	20000	8195
					mold compound	Carbon black	1333-86-4		2.827	mg	5000	2049
connections coating	Solder	2.489	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		2.489	mg	1000000	1804