



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D

** : Required Field*

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2020-12-01
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 *	marianna grasso	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
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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
STP185N55F3	XLDZ*4D5KA62	A	3068	2020-12-01
	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
Not Applicable	Not Applicable	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	DM00698839	

Package Designator	Size	Nbr of instances	Shape	
SIP	10.00,9.10,4.50	3	Through hole	
Comment	TO 220 AB NON ISOL			

QueryList : RoHS Directive 2011/65/EU-July 2011 Annex II amended by Delegated 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 2020/363_ March 2020	
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 3rd January 2020			
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	0.80	die - leadframe	418
Lead	9.89	soft solder	5207

QueryList : REACH-25th June 2020				
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	9.89	Soft solder	5207
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	9.894	Soft solder	955019

Responsible metals sourcing	
Query	Response
The component is containing at least one of the following metals : Cobalt , Gold , Tantalum , Tin , Tungsten.	true
The following metals are present is the component :	Tin,
This product is in the scope of the responsible metals sourcing, its compliance is covered by our company processes .	

Material Composition Declaration :						Mfr Item Name	XLDZ*4D5KA62					
note : Substance present with less 0.001mg will not be declared in this document												
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	15.630	mg	supplier	die	Silicon(Si)	7440-21-3		14.949	mg	956430	7869
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.177	mg	11324	93
				supplier	metallisation	Nicke(Ni)	7440-02-0		0.130	mg	8317	68
				supplier	metallisation	Silver(Ag)	7440-22-4		0.046	mg	2943	24
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.044	mg	2815	23
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.082	mg	5246	43
				supplier	passivation	Silicon oxide	7631-86-9		0.202	mg	12925	106
Leadframe	M-004 Copper and its alloys	1253.737	mg	supplier	alloy & coating	Copper(Cu)	7440-50-8		1251.376	mg	998117	658619
				supplier	alloy & coating	Nicke(Ni)	7440-02-0		0.665	mg	530	350
				supplier	alloy & coating	Iron(Fe)	7439-89-6		1.253	mg	999	659
				supplier	alloy & coating	Iron Phosphide(FeP)	26508-33-8		0.376	mg	301	198
				supplier	alloy & coating	Phosphorus metal	7723-14-0		0.067	mg	53	35
Soft solder	Solder	10.360	mg	SVHC	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	9.894	mg	955019	5207
				supplier	solder	Silver(Ag)	7440-22-4		0.259	mg	25000	136
				supplier	solder	Tin(Sn)	7440-31-5		0.207	mg	19981	109
Bonding wires	M-003 Aluminum and its alloys	3.971	mg	supplier	wire	Aluminium (Al)	7429-90-5		3.971	mg	1000000	2090
Bonding wires 2	M-003 Aluminum and its alloys	0.147	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.146	mg	993197	77
				supplier	wire	Magnesium (Mg)	7439-95-4		0.001	mg	6803	1
Encapsulation	M-011 Other inorganic materials	609.793	mg	supplier	mold compound	Silica vitreous	60676-86-0		424.416	mg	696000	223377
				supplier	mold compound	Quartz	14808-60-7		60.979	mg	100000	32094
				supplier	mold compound	Phenol resin	9003-35-4		36.588	mg	60001	19257
				supplier	mold compound	Epoxy resin	proprietary		79.273	mg	129999	41723
				supplier	mold compound	Carbon black	1333-86-4		3.049	mg	5000	1605
				supplier	mold compound	Polyethylene resin	9002-88-4		2.439	mg	4000	1284
				supplier	mold compound	Mercaptopropyl trimethoxysilane	4420-74-0		2.439	mg	4000	1284
				supplier	mold compound	Triphenylphosphine	603-35-0		0.610	mg	1000	321
connections coating	Solder	6.362	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3348