



## 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  * : Required Field

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2019-01-29
<b>Company Unique ID</b>	NL 008751171801		
<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>	Rossana Bonaccorso	<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>		

**Uncertainty Statement**


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Legal Statement		
<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>
		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
STN4NF20L	CSLL*ML2AB6V	A	Z4XA	2019-01-29
	Amount	UoM	Unit type	ST ECOPACK Grade
	110	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
1	260	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SOT	6.5 - 3.5 - 1.8	4	gull wing	
Comment	Package: SOT 223			

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 26th October 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	0.01	Die	73
Lead	0.40	Soft solder	3664

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	0.40	soft solder	3664
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	0.40	soft solder	954976

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	CSL*ML2AB6V					
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	1.258	mg	supplier	die	Silicon (Si)	7440-21-3		1.215	mg	965819	11045
				supplier	metallization	Aluminium (Al)	7429-90-5		0.005	mg	3975	45
				supplier	Passivation	Silicon Nitride	12033-89-5		0.003	mg	2385	27
				supplier	Passivation	Silicon Oxide	7631-86-9		0.023	mg	18283	209
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.001	mg	794	9
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.008	mg	6359	73
Leadframe	M-004 Copper and its alloys	58.501	mg	supplier	back side metallization	Silver (Ag)	7440-22-4		0.003	mg	2385	27
				supplier	alloy	Copper (Cu)	7440-50-8		57.714	mg	986547	524673
				supplier	alloy	Iron (Fe)	7439-89-6		0.058	mg	991	527
				supplier	alloy	Phosphorus metal	7723-14-0		0.017	mg	291	155
				supplier	metallization	Silver (Ag)	7440-22-4		0.712	mg	12171	6473
Soft solder	Solder	0.422	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high met	0.403	mg	954976	3664
				supplier	solder	Tin (Sn)	7440-31-5		0.008	mg	18957	72
				supplier	solder	Silver (Ag)	7440-22-4		0.011	mg	26067	100
Bonding wires	M-011 Other inorganic materials	0.138	mg	supplier	wire	Copper (Cu)	7440-50-8		0.138	mg	1000000	1255
Encapsulation	M-011 Other inorganic materials	46.862	mg	supplier	mold compound	Silica, vitreous	60676-86-0		38.429	mg	820046	349355
				supplier	mold compound	Phenol Novolac resin	9003-35-4		2.811	mg	59985	25555
				supplier	mold compound	Ortho Cresol Novolac Epoxy resin	29690-82-2		2.811	mg	59985	25555
				supplier	mold compound	Diglycidylether of Tetramethyl biphenol	85954-11-6		2.577	mg	54991	23427
				supplier	mold compound	Carbon black	1333-86-4		0.234	mg	4993	2127
Connections coating	Solder	2.819	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		2.819	mg	1000000	25627