



## 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>	2022-04-19
<b>Company Unique ID</b>	NL 008751171B01		
<b>Contact Name *</b>	Refer to Supplier Comment section	<b>Contact Email *</b>	Refer to Supplier Comment section
<b>Contact Phone *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Authorized Representative *</b>	Floriana SAN BIAGIO	<b>Representative Title</b>	AMS Material Declaration 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
	RFL*LM171C6	A	998G	2022-04-19
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, annealed	Copper Alloy	,	

Package Designator	Package Size	Nbr of instances	Shape	
SOT	6.5 x 3.5	4	gull wing	
Comment	LL SOT 223; MDF is valid for LM217MS-TR			

QueryList : RoHS Directive 2011/65/EU- 8 June 2011 – Annex II amended by Delegated Directive 2015/863 - 31 March 2015	
Query	Response
1 - Product(s) meets EU RoHS requirement without any exemptions	true
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)	false
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Exemption Id.	Description

QueryList : California Prop65 list, dated 25th Feb 2022			
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	0.015	die metalisation	136
Lead	0.000		0
Lead-Borate Glass	0.000		0
Lead Zirconate Titanate	0.000		0
Antimony trioxide	0.000		0
Bisphenol A	0.000		0

QueryList : Chinese RoHS , references : SJT 11364 – 2014 and GBT 26572 – 2014				
Query	Response			
1 - Product(s) requires marking for the presence of restricted substances and must be marked with an Environmental Protection Use Period under China's Measures for Administration of the control of pollution by Electronic Information Products	false			
2 - Product(s) is eligible for marking with the e code under China's Measures for Administration of the control of pollution by Electronic Information Products	false			
Hasardous substance				
Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Hexavalent Chromium (Cr VI)	PBB & PBDE
0	0	0	0	0

QueryList : REACH-17 Jan 2022				
Query	Response			
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH	true			
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
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	true			
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material

QueryList : 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 in the component :	Tin,
This product is in the scope of the responsible metals sourcing, its compliance is covered by our company processes .	

QueryList : Korea Chemical Control Act_ 27 Dec 2017 update				
Query	Response			
The Product does contain at least one of the substances listed in Chemical Control Act	false			

China GB 33372-2020 Limit standard for volatile organic compounds content in adhesives - 4 March 2020 application date 1st December 2020	
Query	Response
The product contains adhesives identified under GB 33372	false

Stockholm Convention Persistent Organic Pollutants	
Query	Response
Product is compliant with Stockholm Convention Persistent Organic Pollutants Annex I	false

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	RFL*LM171C6	110.0000		600001.0	999999.0	
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	2.382	mg	supplier	die	Silicon(Si)	7440-21-3		2.308	mg	968934	20982
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.029	mg	12175	264
				supplier	metallisation	Chromium(Cr)	7440-47-3		0.002	mg	840	18
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.015	mg	6297	136
				supplier	metallisation	Silver(Ag)	7440-22-4		0.005	mg	2099	45
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.010	mg	4198	91
				supplier	passivation	Silicon oxide	7631-86-9		0.013	mg	5458	118
				supplier	alloy	Copper (Cu)	7440-50-8		55.402	mg	999648	503655
Leadframe	M-004 Copper and its alloys	55.477	mg	supplier	alloy	Iron(Fe)	7439-89-6		0.055	mg	991	500
				supplier	alloy	Phosphorus (P)	7723-14-0		0.017	mg	306	155
				supplier	metallization	Silver (Ag)	7440-22-4		0.003	mg	54	27
				supplier	glue	Silver(Ag)	7440-22-4		0.418	mg	800000	3796
Die attach	M-015 Other organic materials	0.522	mg	supplier	glue	Acrylic resin	Proprietary		0.037	mg	70000	332
				supplier	glue	Polybutadiene derivative	Proprietary		0.021	mg	40000	190
				supplier	glue	Acrylate	Proprietary		0.021	mg	40000	190
				supplier	glue	Epoxy resin	29690-82-2		0.010	mg	20000	95
				supplier	glue	Butadiene copolymer	Proprietary		0.005	mg	10000	47
				supplier	glue	Additive	Proprietary		0.008	mg	15000	71
				supplier	glue	Peroxide	Proprietary		0.003	mg	5000	24
				supplier	wire	Copper(Cu)	7440-50-8		0.096	mg	1000000	873
Bonding wires	M-004 Copper and its alloys	0.096	mg	supplier	wire	Copper(Cu)	7440-50-8		0.096	mg	1000000	873
				supplier	mold compound	Epoxy Resin 1	29690-82-2		0.904	mg	18378	8216
Encapsulation	M-015 Other organic materials	49.176	mg	supplier	mold compound	Epoxy Resin 1	25068-38-6		0.904	mg	18378	8216
				supplier	mold compound	Hardener	Proprietary		2.410	mg	49008	21909
				supplier	mold compound	Catalyst	Proprietary		0.408	mg	8297	3709
				supplier	mold compound	Carbon Black	1333-86-4		0.121	mg	2450	1095
				supplier	mold compound	Amorphous silica1	60676-86-0		37.200	mg	756467	338182
				supplier	mold compound	Amorphous silica12	7631-86-9		7.230	mg	147023	65727
Connections coating	Solder	2.347	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		2.347	mg	1000000	21336