



Materials Declaration Form

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

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2020-08-12
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 *	Floriana SAN BIAGIO	Representative Title	AMS 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

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
	MR59*UA17AA5	A	9957	2020-08-12
Amount	UoM	Unit type	ST ECOPACK Grade	
28	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	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Package Size	Nbr of instances	Shape	
QFN	3 x 3	8	Flat	
Comment	59 VFDFPN 8 3x3x1.0 PITCH 0.65 SAWN; MDF is valid for ST1S31PUR			

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	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 : ELV directive : 2000/53/EC amended 2020/363_March 2020	
Query	Response
1 - Product(s) meets EU ELV requirements without any exemptions	true
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	false
Exemption Id.	Description

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	0.13	die/alloy	4506

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				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 : 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
Substance	Homogeneous Material impacted	Content in Homogeneous Material (mg)	Concentration in the material(%)	Application Purpose

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	MR59*UA17AA5				4999951.0	1003766.0
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	1.697	mg	supplier	die	Silicon(Si)	7440-21-3		1.591	mg	937537	56821
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.020	mg	11786	714
				supplier	metallisation	Chromium(Cr)	7440-47-3		0.002	mg	1179	71
				supplier	metallisation	Gold(Au)	7440-57-5		0.004	mg	2357	143
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.007	mg	4125	250
				supplier	metallisation	Tungsten(W)	7440-33-7		0.016	mg	9428	571
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.004	mg	2357	143
				supplier	passivation	Silicon oxide	7631-86-9		0.033	mg	19446	1179
				supplier	polymer coating	polyimide	proprietary		0.020	mg	11786	714
Leadframe	M-004 Copper and its alloys	9.420	mg	supplier	alloy & coating	Copper(Cu)	7440-50-8		9.048	mg	960550	323156
				supplier	alloy & coating	Nickel(Ni)	7440-02-0		0.119	mg	12650	4256
				supplier	alloy & coating	Iron(Fe)	7439-89-6		0.221	mg	23500	7906
				supplier	alloy & coating	Phosphorus metal	7723-14-0		0.078	mg	830	279
				supplier	alloy & coating	Zinc(Zn)	7440-66-6		0.118	mg	1250	421
				supplier	alloy & coating	Palladium(Pd)	7440-05-3		0.009	mg	1000	336
				supplier	alloy & coating	Gold(Au)	7440-57-5		0.002	mg	170	57
				supplier	glue	Silver (Ag)	7440-22-4		0.026	mg	850000	911
				supplier	glue	Carbocyclic acrylate	proprietary		0.003	mg	100000	107
Die attach	M-015 Other organic materials	0.030	mg	supplier	glue	2-Propenoic acid, 2-methyl-, 2-[[2,3,3a,4,7,7a]3,3,8,8-tetrahydro-1H-indolo[1,2-b]pyridine-5-carboxylate	68586-19-6		0.001	mg	45000	48
				supplier	glue	2-(3,4-Epoxy)cyclohexylethyltrimethoxysilane	3388-04-3		0.000	mg	5000	5
				supplier	wire	Gold (Au)	7440-57-5		0.100	mg	1000000	3571
Bonding wires	M-008 Precious metals	0.100	mg	supplier	wire	Gold (Au)	7440-57-5		0.100	mg	1000000	3571
				supplier	mold compound	Epoxy Resin	proprietary		0.506	mg	30000	18063
				supplier	mold compound	Phenol Resin	proprietary		0.506	mg	30000	18063
				supplier	mold compound	Silica(Amorphous) A	60676-86-0		13.319	mg	790000	475665
Encapsulation	M-015 Other organic materials	16.859	mg	supplier	mold compound	Silica(Amorphous) B	7631-86-9		2.478	mg	147000	88510
				supplier	mold compound	Carbon Black	1333-86-4		0.051	mg	3000	1806