



Material declaration form

General Information			
IPC	1752	Version	2
Form type*	Distribute		
Sectionals*	Material information	Subsectionals*	A-D
	Manufacturing information		

Supplier Information			
Company name*	STMicroelectronics	Response Date*	2025-05-20
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*	MDG CHAMPION	Representative title	MDGMaterial Declaration 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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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	Manufacturing site	date
STM32L451CEU3	F9MI*462XXXY	A	P1C7	2025-05-20
Amount	Unit of measure	Unit type	ST ECOPACK grade	
97	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL rating	Classification temperature	Number of reflow cycles		
3	260	3		
Bulk solder termination	Terminal plating	Terminal base alloy	Comment	
Not Applicable	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy	0	
Package designator	Package size	Number of instances	Shape	
QFN	7x7	48	Flat	
Comment	Package : A0B9 UFQFPN 7X7X0.55 48L 0.5 MM PITCH 8202210			

QueryList : RoHS Directive 2011/65/EU- 8 June 2011 – Annex II amended by Delegated Directive 2015/863 - 31 March 2015		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 : REACH-21st January 2025				Response
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
,	#N/A			



Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	F9MI*462XXXY		97.1860		6000000.0	1000000.0
Homogeneous material	Material group	Mass	Unit of measure	Level	Substance category	Substance	CAS	Exempt	Mass	Unit of measure	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die or dies	M-011 Other inorganic materials	4.980	mg	supplier	die	Silicon (Si)	7440-21-3		4.498	mg	903174	46279.91
				supplier	metallization	Aluminium (Al)	7429-90-5		0.023	mg	4567	234.02
				supplier	metallization	Copper (Cu)	7440-50-8		0.205	mg	41105	2106.28
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.066	mg	13245	678.69
				supplier	metallization	Titanium (Ti)	7440-32-6		0.002	mg	457	23.42
				supplier	metallization	Tungsten (W)	7440-33-7		0.002	mg	457	23.42
				supplier	Passivation	Silicon Nitride	12033-89-5		0.052	mg	10505	538.29
				supplier	Passivation	Silicon Oxide	7631-86-9		0.132	mg	26490	1357.38
				supplier	Metals	Silver (Ag)	7440-22-4		0.406	mg	800000	4179.12
Glue Epoxy (OMI519)	M-011 Other inorganic materials	0.508	mg	supplier	Plastics/polymers	methylene diacrylate	42594-17-2		0.083	mg	164000	856.72
				supplier	Polymers	Dicyclopentenyloxyethyl methacrylate	68586-19-6		0.013	mg	25000	130.60
				supplier	Polymers	Epoxyoctaethyltrimethoxysilane	3388-04-3		0.003	mg	5000	26.12
				SVHC	Organic Compounds	Bis(o,o-dimethylbenzyl) peroxide	80-43-3		0.003	mg	5000	26.12
				supplier	Metals	Palladium (Pd)	7440-05-3		0.001	mg	1000	5.22
				supplier	Glass	silica vitreous	60676-86-0		29.911	mg	880000	307774.12
Encapsulation (CEL-9240ZHF10W)	M-011 Other inorganic materials	33.990	mg	supplier	Epoxy Resin	Biphenyl epoxy resin	85954-11-6		1.700	mg	50000	17487.17
				supplier	Phenol Resin	Phenolic resin	205830-20-2		1.326	mg	39000	13639.99
				supplier	Epoxy Resin	Epoxy resin	Proprietary		0.680	mg	20000	6994.87
				supplier	Additive	carbon black	1333-86-4		0.068	mg	2000	699.49
				supplier	Metals	other	Proprietary		0.306	mg	9000	3147.69
				supplier	Metals	Copper	7440-50-8		0.136	mg	990000	1401.16
Bonding wire (Cu)	M-011 Other inorganic materials	0.138	mg	supplier	Metals	Others	Proprietary		0.001	mg	10000	14.15
				supplier	Metals	Nickel	7440-02-0		1.582	mg	29365	16279.37
				supplier	Metals	Silicon	7440-21-3		0.350	mg	6500	3603.47
Leadframe (C194)	M-011 Other inorganic materials	53.878	mg	supplier	Metals	Magnesium	7439-95-4		0.084	mg	1565	867.60
				supplier	Metals	Silver	7440-22-4		3.394	mg	63000	34925.94
				supplier	Metals	Copper	7440-50-8		48.467	mg	899570	498703.63
				supplier	Metals	Nickel (Ni)	7440-02-0		3.385	mg	916800	34834.77
Leadframe coating (NiPdAu)	M-011 Other inorganic materials	3.693	mg	supplier	Metals	Palladium (Pd)	7440-05-3		0.217	mg	58700	2230.37
				supplier	Metals	Gold (Au)	7440-57-5		0.090	mg	24500	930.90