



## Material declaration form

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

Supplier Information			
Company name*	STMicroelectronics	Response Date*	2024-11-11
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 : <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**

Supplier acceptance*	true	Legal declaration*	Standard
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
STM32L4P5CET6	645B*471XXXZ	A	998Z	2024-11-11
	Amount	Unit of measure	Unit type	ST ECOPACK grade
	181	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	Tin (Sn), matte, annealed	Copper Alloy	0	
Package designator	Package size	Number of instances	Shape	
QFP	7x7	48	Gull wing	
Comment	Package : 5B LQFP 48 7x7x1.4 1 0110596			

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-27th June 2024				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 :						Mfr Item Name	645B*471XXXZ		180.9298		6000000.0	1000000.0
note : Substance present with less 0.001mg will not be declared in this document												
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	20.001	mg	supplier	die	Silicon (Si)	7440-21-3		19.318	mg	965861	106772
				supplier	metallization	Aluminium (Al)	7429-90-5		0.032	mg	1623	179
				supplier	metallization	Copper (Cu)	7440-50-8		0.289	mg	14439	1596
				supplier	metallization	Cobalt (Co)	7440-48-4		0.001	mg	56	6
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.094	mg	4701	520
				supplier	metallization	Titanium (Ti)	7440-32-6		0.003	mg	168	19
				supplier	metallization	Tungsten (W)	7440-33-7		0.002	mg	112	12
				supplier	Passivation	Silicon Nitride	12033-89-5		0.074	mg	3694	408
				supplier	Passivation	Silicon Oxide	7631-86-9		0.187	mg	9346	1033
				supplier	Metals	Silver	7440-22-4		2.181	mg	815000	12054
Glue Epoxy (3230)	M-011 Other inorganic materials	2.676	mg	supplier	Plastics/polymers	2,2'-(Methylenebis(phenyleneoxymethylene))bisox	39817-09-9		0.080	mg	30000	444
				supplier	Organic Compounds	Dihydro-3-(tetrapropenyl)furan-2,5-dione	26544-38-7		0.080	mg	30000	444
				supplier	Organic Compounds	Epoxy resin	Proprietary		0.080	mg	30000	444
				supplier	Organic Compounds	Dodecylloxirane	3234-28-4		0.080	mg	30000	444
				SVHC	Organic Compounds	Hexahydromethylphthalic anhydride	25550-51-0		0.080	mg	30000	444
				supplier	Organic Compounds	Epoxy resin modifier	Proprietary		0.080	mg	30000	444
				supplier	Metallic compounds	Copper oxide	1317-38-0		0.013	mg	5000	74
				supplier	Plastics/polymers	Epoxy Resin A	Proprietary		2.219	mg	21000	12265
Encapsulation (EME-G631SHQ)	M-011 Other inorganic materials	105.673	mg	supplier	Plastics/polymers	Epoxy Resin B	Proprietary		2.219	mg	21000	12265
				supplier	Plastics/polymers	Phenol Resin	Proprietary		5.918	mg	56000	32707
				supplier	Glass	Silica(Amorphous)A	60676-86-0		82.473	mg	780450	455827
				supplier	Glass	Silica(Amorphous)B	7631-86-9		12.186	mg	115320	67353
				supplier	Non-metals	Carbon Black	1333-86-4		0.658	mg	6230	3639
				supplier	Metals	Gold	7440-57-5		0.501	mg	1000000	2770
Bonding Wire (Au)	Bonding Wire	0.501	mg	supplier	Metals	Tin	7440-31-5		1.078	mg	1000000	5960
Plating anode (Sn)	M-011 Other inorganic materials	1.078	mg	supplier	Metals	Copper	7440-50-8		49.582	mg	972200	274041
Leadframe (C194 + Ag)	Copper & its alloys	51.000	mg	supplier	Metals	Iron	7439-89-6		1.168	mg	22900	6455
				supplier	Metals	Zinc	7440-66-6		0.077	mg	1500	423
				supplier	Non-Metals	Phosphorus	7723-14-0		0.015	mg	300	85
				supplier	Metals	Silver	7440-22-4		0.158	mg	3100	874