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 ***	23-08-2023
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 *	Material Declaration champion	**Representative Title**	Material 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

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 omprehensive 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.

Signature Not Verified

Digitally signed by MDF Champion
Date: 2023.08.23 12:24:41 +08:00

Product				
Mfr Item Number	**Mfr Item Name**	**Version**	**Mfr Site**	**Date**
STM32G473CET3 STM32G473CET3TR	785B*469XXXX	A	998Z	23-08-2023
	Amount	UoM	**Unit type**	**ST ECOPACK Grade**
	183.93	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**		
3	260	3		
bulk Solder Termination	**Terminal Plating**	**Terminal Base Alloy**	**Comment**	
Not Applicable ; if coating is used or other bulk termaination : add in comments	Tin (Sn), immersion	Copper Alloy		

Package Designator	**Size**	**Nbr of instances**	**Shape**	
QFP	7x7	48	L bend	
Comment	Package : 5B LQFP 48 7x7x1.4 1 0110596			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 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 : REACH-10 Jun 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

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						**Mfr Item Name**	**785B*469XXXX**				6000001.0	1000003.1
Homogeneous Material	**Material Group**	**Mass**	**UoM**	**Level**	**Substance Category**	**Substance**	**CAS**	**Exempt**	**Mass**	**UoM**	**Concentration in homogeneous material (ppm)**	**Concentration in product (ppm)**
Die or dies	M-011 Other inorganic materials	15.195	mg	supplier	die	Silicon (Si)	7440-21-3		14.607	mg	961303	79416
				supplier	metallization	Aluminium (Al)	7429-90-5		0.028	mg	1843	152
				supplier	metallization	Copper (Cu)	7440-50-8		0.249	mg	16387	1354
				supplier	metallization	Cobalt (Co)	7440-48-4		0.001	mg	66	5
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.081	mg	5331	440
				supplier	metallization	Titanium (Ti)	7440-32-6		0.003	mg	197	16
				supplier	metallization	Tungsten (W)	7440-33-7		0.002	mg	132	11
				supplier	Passivation	Silicon Nitride	12033-89-5		0.063	mg	4146	343
				supplier	Passivation	Silicon Oxide	7631-86-9		0.161	mg	10596	875
Glue epoxy (3230)	M-011 Other inorganic materials	0.884	mg	Supplier	Metals	Silver	7440-22-4		0.721	mg	815000	3918
				Supplier	Plastics/polymers	2,2'-[Methylenebis(phenyleneoxymethylene)]b	39817-09-9		0.027	mg	30000	144
				Supplier	Organic Compounds	Dihydro-3-(tetrapropenyl)furan-2,5-dione	26544-38-7		0.027	mg	30000	144
				Supplier	Organic Compounds	Epoxy resin	Proprietary		0.027	mg	30000	144
				Supplier	Organic Compounds	Dodecyloxirane	3234-28-4		0.027	mg	30000	144
				Supplier	Organic Compounds	Hexahydromethylphthalic anhydride	25550-51-0		0.027	mg	30000	144
				Supplier	Organic Compounds	Epoxy resin modifier	Proprietary		0.027	mg	30000	144
				Supplier	Metallic compounds	Copper oxide	1317-38-0		0.004	mg	5000	24
Encapsulation (EME-G631SHQ)	M-011 Other inorganic materials	110.513	mg	Supplier	Plastics/polymers	Epoxy Resin A	Proprietary		2.321	mg	21000	12618
				Supplier	Plastics/polymers	Epoxy Resin B	Proprietary		2.321	mg	21000	12618
				Supplier	Plastics/polymers	Phenol Resin	Proprietary		6.189	mg	56000	33647
				Supplier	Glass	Silica(Amorphous)A	60676-86-0		86.250	mg	780450	468929
				Supplier	Glass	Silica(Amorphous)B	7631-86-9		12.744	mg	115320	69289
				Supplier	Non-metals	Carbon Black	1333-86-4		0.688	mg	6230	3743
Bonding Wire (Au)	Bonding Wire	0.263	mg	Supplier	Metals	Gold (Au)	7440-57-5		0.260	mg	990000	1414
				Supplier	Non-metals	Other	Proprietary		0.003	mg	10000	14
External plating (Sn)	M-011 Other inorganic materials	1.078	mg	Supplier	Metals	Tin (Sn)	7440-31-5		1.078	mg	1000000	5863
Leadframe _C194+Ag_HDS	Copper & its alloys	55.997	mg	Supplier	Metals	Copper (Cu)	7440-50-8		54.457	mg	972499	296076
				Supplier	Metals	Iron (Fe)	7439-89-6		1.266	mg	22601	6881
				Supplier	Metals	Zinc (Zn)	7440-66-6		0.084	mg	1500	457
				Supplier	Metals	Phophorus (Ph)	7723-14-0		0.017	mg	300	91
				Supplier	Metals	Silver (Ag)	7440-22-4		0.174	mg	3100	944