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 ***	21-11-2023
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

While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.

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: 2023.11.21
21:16:32 +08:00

Product

Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32G473VET3	5E1L*469XXXX	A	9998	21-11-2023
	Amount	UoM	**Unit type**	**ST ECOPACK Grade**
	677.85	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), matte	Copper Alloy	

Package Designator	Size	Nbr of instances	Shape	
QFP	14x14	100	L bend	
Comment	Package : 1L LQFP 100 14x14x1.4 1 0086901			

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-14th June 2023

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**	**5E1L*469XXXX**				7000001.0	999998.2
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	14.923	mg	supplier	die	Silicon (Si)	7440-21-3		14.335	mg	960598	21148
				supplier	metallization	Aluminium (Al)	7429-90-5		0.028	mg	1876	41
				supplier	metallization	Copper (Cu)	7440-50-8		0.249	mg	16686	367
				supplier	metallization	Cobalt (Co)	7440-48-4		0.001	mg	67	1
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.081	mg	5428	119
				supplier	metallization	Titanium (Ti)	7440-32-6		0.003	mg	201	4
				supplier	metallization	Tungsten (W)	7440-33-7		0.002	mg	134	3
				supplier	Passivation	Silicon Nitride	12033-89-5		0.063	mg	4222	93
				supplier	Passivation	Silicon Oxide	7631-86-9		0.161	mg	10789	238
Leadfram (C194 + Ag)	Copper and its alloy	153.070	mg	supplier	ALLOY	Copper (Cu)	7440-50-8		149.243	mg	975000	220171
				supplier	ALLOY	Iron (Fe)	7439-89-6		3.597	mg	23500	5307
				supplier	ALLOY	Zinc (Zn)	7440-66-6		0.184	mg	1200	271
				supplier	ALLOY	Metallic Phosphorus (P)	7723-14-0		0.046	mg	300	68
Leadframe platin (Ag)	M-011 Other inorganic materials	5.288	mg	supplier	COATING	Silver (Ag)	7440-22-4		5.288	mg	1000000	7800
Glue Epoxy (3230)	M-011 Other inorganic materials	0.795	mg	supplier	GLUE	Silver (Ag)	7440-22-4		0.609	mg	766500	899
				supplier	GLUE	2,2'-[Methylenebis(phenyleneoxymethylene)]b	39817-09-9		0.060	mg	75000	88
				supplier	GLUE	Organic anhydride	26544-38-7		0.060	mg	75000	88
				supplier	GLUE	1,3-Di-2-propenyl-2- (2-propenyloxy) benzene,	Proprietary		0.024	mg	30000	35
				supplier	GLUE	Epoxide	3234-28-4		0.024	mg	30000	35
				supplier	GLUE	1,4-Bis(2,3-epoxypropoxy)butane	2425-79-8		0.014	mg	17500	21
				supplier	GLUE	Copper oxide	1317-38-0		0.001	mg	1000	1
				supplier	GLUE	Maleic anhydride	108-31-6		0.004	mg	5000	6
Bonding Wire (Cu)	M-011 Other inorganic materials	0.952	mg	supplier	BONDING WIRE	Copper (Cu)	7440-50-8		0.919	mg	964990	1355
				supplier	BONDING WIRE	Palladium (Pd)	7440 05-3		0.029	mg	30000	42
				supplier	BONDING WIRE	Silver (Ag)	7440-22-4		0.000	mg	10	0
				supplier	BONDING WIRE	Gold (Au)	7440-57-5		0.005	mg	5000	7
Encapsulation (G631HQ)	M-011 Other inorganic materials	498.061	mg	supplier	MOLDING COMPOUND	Epoxy Resin A	Proprietary		4.981	mg	10000	7348
				supplier	MOLDING COMPOUND	Epoxy Resin B	Proprietary		4.981	mg	10000	7348
				supplier	MOLDING COMPOUND	Phenol Resin	Proprietary		24.903	mg	50000	36738
				supplier	MOLDING COMPOUND	Silica(Amorphous) A	60676-86-0		408.410	mg	820000	602509
				supplier	MOLDING COMPOUND	Silica(Amorphous) B	7631-86-9		49.806	mg	100000	73477
				supplier	MOLDING COMPOUND	Carbon Black	1333-86-4		4.981	mg	10000	7348
External Plating (Sn)	M-011 Other inorganic materials	4.760	mg	supplier	EXTERNAL PLATING	Tin (Sn)	7440-31-5		4.760	mg	1000000	7023