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 ***	20-07-2022
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: 2022.07.25
08:36:54 +08:00

Product				
Mfr Item Number	**Mfr Item Name**	**Version**	**Mfr Site**	**Date**
STM32G491CEU3 STM32G491CEU3TR	73MI*479XXXZ	A	998Z	20-07-2022
	Amount	UoM	**Unit type**	**ST ECOPACK Grade**
	101.44	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**	
QFN	7x7x0.55	48	flat	
Comment	Package : A0B9 UFQFPN 7X7X0.55 48L 0.5 MM PITCH 8202210			

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-17 Jan 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**	**73MI*479XXXZ**				5999999.0	999995.0
Homogeneous Material	**Material Group**	**Mass**	**UoM**	**Level**	**Substance Category**	**Substance**	**CAS**	**Exempt**	**Mass**	**UoM**	**Concentration in homogeneous material (ppm)**	**Concentration in product (ppm)**
Die or dies	M-011 Other inorganic materials	4.435	mg	supplier	die	Silicon (Si)	7440-21-3		4.004	mg	902818	39471
				supplier	metallization	Aluminium (Al)	7429-90-5		0.021	mg	4735	207
				supplier	metallization	Copper (Cu)	7440-50-8		0.182	mg	41037	1794
				supplier	metallization	Cobalt (Co)	7440-48-4		0.001	mg	225	10
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.059	mg	13303	582
				supplier	metallization	Titanium (Ti)	7440-32-6		0.002	mg	451	20
				supplier	metallization	Tungsten (W)	7440-33-7		0.002	mg	451	20
				supplier	Passivation	Silicon Nitride	12033-89-5		0.046	mg	10372	453
				supplier	Passivation	Silicon Oxide	7631-86-9		0.118	mg	26607	1163
Die Attach Epoxy_EN4900GC_SD	M-011 Other inorganic materials	1.509	mg	Supplier	Organic Compounds	Acrylic resin	Trade Secret		0.106	mg	70000	1041
				Supplier	Organic Compounds	Polybutadiene derivative	Trade Secret		0.030	mg	20000	297
				Supplier	Organic Compounds	Butadiene copolymer	Trade Secret		0.023	mg	15000	223
				Supplier	Organic Compounds	Acrylate	Trade Secret		0.081	mg	54000	803
				Supplier	Organic Compounds	Epoxy resin	Trade Secret		0.045	mg	30000	446
				Supplier	Organic Compounds	Peroxide	Trade Secret		0.012	mg	8000	119
				Supplier	Organic Compounds	Additive	Trade Secret		0.027	mg	18000	268
				Supplier	Metals	Silver	7440-22-4		1.184	mg	785000	11674
Mold Compound_EME-G770_Sumiton	M-011 Other inorganic materials	34.355	mg	Supplier	Organic Compounds	Epoxy Resin A	Trade Secret		0.721	mg	21000	7112
				Supplier	Organic Compounds	Epoxy Resin B	Trade Secret		0.721	mg	21000	7112
				Supplier	Organic Compounds	Phenol Resin A	Trade Secret		0.721	mg	21000	7112
				Supplier	Glass	Silica(Amorphous)A	60676-86-0		26.812	mg	780450	264312
				Supplier	Glass	Silica(Amorphous)B	7631-86-9		3.962	mg	115320	39055
				Supplier	Organic Compounds	Carbon Black	1333-86-4		0.214	mg	6230	2110
				Supplier	Metallic compounds	Metal Hydroxide	Trade Secret		0.481	mg	14000	4741
				Supplier	Organic Compounds	Phenol Resin B	Trade Secret		0.721	mg	21000	7112
GOLD WIRE AU 3N TYPE_MKE	Bonding Wire	0.034	mg	Supplier	Metals	Gold	7440-57-5		0.034	mg	1000000	339
Plating anode_Pure Tin_ASAHI	M-011 Other inorganic materials	1.078	mg	Supplier	Metals	Tin	7440-31-5		1.078	mg	1000000	10631
Leadframe _C7025+AG_HDS	Copper & its alloys	60.030	mg	Supplier	Metals	Copper	7440-50-8		55.056	mg	917140	542733
				Supplier	Metals	Nickel	7440-02-0		1.351	mg	22500	13315
				Supplier	Metals	Silicon	7440-21-3		0.156	mg	2600	1539
				Supplier	Metals	Magnesium	7439-95-4		0.069	mg	1150	681
				Supplier	Metals	Siliver	7440-22-4		3.398	mg	56610	33500