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 ***	**2022-08-12**
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: 2022.12.08
10:30:58 +08:00

Product				
Mfr Item Number	**Mfr Item Name**	**Version**	**Mfr Site**	**Date**
STM32F413CHU3	73MI*463XXXA	A	998Z	2022-08-12
	Amount	UoM	**Unit type**	**ST ECOPACK Grade**
	103.41	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 termination	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- 8 June 2011 – Annex II amended by Delegated Directive 2015/863 - 31 March 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**	**73MI*463XXXA**				6000001.0	1000003.2
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	5.676	mg	supplier	die	Silicon (Si)	7440-21-3		4.922	mg	867160	47597
				supplier	metallization	Aluminium (Al)	7429-90-5		0.053	mg	9338	513
				supplier	metallization	Copper (Cu)	7440-50-8		0.342	mg	60254	3307
				supplier	metallization	Cobalt (Co)	7440-48-4		0.001	mg	176	10
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.048	mg	8457	464
				supplier	metallization	Tungsten (W)	7440-33-7		0.154	mg	27132	1489
				supplier	Passivation	Silicon Nitride	12033-89-5		0.040	mg	7047	387
				supplier	Passivation	Silicon Oxide	7631-86-9		0.116	mg	20437	1122
Glue epoxy_8290_henkel	M-011 Other inorganic materials	1.930	mg	Supplier	Metals	Silver	7440-22-4		1.650	mg	855000	15961
				Supplier	Plastics/polymers	Epoxy resin 1	Trade Secret		0.039	mg	20000	373
				Supplier	Organic Compounds	Epoxy resin 2	Trade Secret		0.039	mg	20000	373
				Supplier	Organic Compounds	.gamma.-Butyrolactone	96-48-0		0.058	mg	30000	560
				Supplier	Organic Compounds	Epoxy resin 3	Trade Secret		0.039	mg	20000	373
				Supplier	Organic Compounds	Amine	Trade Secret		0.039	mg	20000	373
				Supplier	Metallic compounds	Copper oxide	1317-38-0		0.058	mg	30000	560
				Supplier	Organic Compounds	1,4-Bis(2,3-epoxypropoxy)butane	2425-79-8		0.010	mg	5000	93
Encapsulation_eme-g770_sumitomo	M-011 Other inorganic materials	32.987	mg	Supplier	Organic Compounds	Epoxy Resin A	Trade Secret		0.693	mg	21000	6699
				Supplier	Organic Compounds	Epoxy Resin B	Trade Secret		0.693	mg	21000	6699
				Supplier	Organic Compounds	Phenol Resin A	Trade Secret		0.693	mg	21000	6699
				Supplier	Glass	Silica(Amorphous)A	60676-86-0		25.745	mg	780450	248968
				Supplier	Glass	Silica(Amorphous)B	7631-86-9		3.804	mg	115320	36788
				Supplier	Organic Compounds	Carbon Black	1333-86-4		0.206	mg	6230	1987
				Supplier	Metallic compounds	Metal Hydroxide	Trade Secret		0.462	mg	14000	4466
				Supplier	Organic Compounds	Phenol Resin B	Trade Secret		0.693	mg	21000	6699
Gold Wire Au 3N Type_Mke	Bonding Wire	0.703	mg	Supplier	Metals	Gold	7440-57-5		0.703	mg	1000000	6794
Plating Anode_Pure Tin_Asahi	M-011 Other inorganic materials	1.078	mg	Supplier	Metals	Tin	7440-31-5		1.078	mg	1000000	10429
Leadframe _C7025+Ag_Hds	Copper & its alloys	61.032	mg	Supplier	Metals	Copper	7440-50-8		55.975	mg	917140	541312
				Supplier	Metals	Nickel	7440-02-0		1.373	mg	22500	13280
				Supplier	Metals	Silicon	7440-21-3		0.159	mg	2600	1535
				Supplier	Metals	Magnesium	7439-95-4		0.070	mg	1150	679
				Supplier	Metals	Siliver	7440-22-4		3.455	mg	56610	33412