



## Materials Declaration Form

<b>IPC Form Type *</b>	1752 Distribute	<b>Version</b>	2
<b>Sectionals *</b>	Material Info Manufacturing Info	<b>Subsectionals *</b>	A-D <i>* : Required Field</i>


Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	17-11-2022
<b>Company Unique ID</b>	NL 008751171B01		
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Contact Phone *</b>	Refer to Supplier Comment section	<b>Contact Email *</b>	Refer to Supplier Comment section
<b>Authorized Representative *</b>	Material Declaration champion	<b>Representative Title</b>	Material Declaration champion
<b>Representative Phone *</b>	Refer to Supplier Comment section	<b>Representative Email *</b>	Refer to Supplier Comment section
<b>Supplier Comment</b>	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			
<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>	Standard
<b>Legal Statement</b>	<p>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.</p>		

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32F405ZGT6	E01A*413XXXY	A	9991	17-11-2022
	Amount	UoM	Unit type	ST ECOPACK Grade
	1315.00	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		 life.augmented
3	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable; if coating is used or other bulk termination	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFP	20x20	144	L bend	
Comment	Package : 1A LQFP 144 20X20X1.4 2 0099183			

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	E01A*413XXY				5999999.0	1000000.5				
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	14.897	mg	supplier	die	Silicon (Si)	7440-21-3		14.108	mg	947036	10729				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.055	mg	3692	42				
				supplier	metallization	Copper (Cu)	7440-50-8		0.359	mg	24099	273				
				supplier	metallization	Cobalt (Co)	7440-48-4		0.001	mg	67	1				
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.050	mg	3356	38				
				supplier	metallization	Tungsten (W)	7440-33-7		0.161	mg	10808	122				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.042	mg	2819	32				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.121	mg	8122	92				
				Leadframe LF# A25582		554.773	mg	supplier	Leadframe	Copper (Cu)	7440-50-8		531.195	mg	957500	403951
								supplier	Leadframe	Nickel (Ni)	7440-02-0		16.532	mg	29800	12572
supplier	Leadframe	Silicon (Si)	7440-21-3						3.606	mg	6500	2742				
supplier	Leadframe	Magnesium (Mg)	7439-95-4						0.832	mg	1500	633				
supplier	Leadframe	Silver (Ag)	7440-22-4						2.607	mg	4700	1983				
Glue (CRM 1076WA)		4.500	mg	supplier	Glue or tape	Silver Powder	7440-22-4		3.825	mg	850000	2909				
				supplier	Glue or tape	Epoxy Resin A	9003-36-5		0.239	mg	53000	181				
				supplier	Glue or tape	Epoxy Resin B	Trade Secret		0.135	mg	30000	103				
				supplier	Glue or tape	Diluent A	Trade Secret		0.045	mg	10000	34				
				supplier	Glue or tape	Diluent B	Trade Secret		0.135	mg	30000	103				
				supplier	Glue or tape	Hardener	Trade Secret		0.090	mg	20000	68				
				supplier	Glue or tape	Dicyandiamide	461-58-5		0.009	mg	2000	7				
				supplier	Glue or tape	Organic peroxide	Proprietary		0.023	mg	5000	17				
Bonding wire (Au 0.8 mils)		2.500	mg	supplier	Bonding wire	Au	7440-57-5		2.475	mg	990000	1882				
				supplier	Bonding wire	Pd	7440-05-3		0.025	mg	10000	19				
Encapsulation (EME-G6315H)		726.830	mg	supplier	Molding Compound	Epoxy Resin A	Proprietary		14.537	mg	20000	11054				
				supplier	Molding Compound	Epoxy Resin B	Proprietary		14.537	mg	20000	11054				
				supplier	Molding Compound	Phenol Resin	Proprietary		39.976	mg	55000	30400				
				supplier	Molding Compound	Carbon Black	1333-86-4		3.998	mg	5500	3040				
				supplier	Molding Compound	Silica(Amorphous) A	60676-86-0		544.759	mg	749500	414265				
				supplier	Molding Compound	Silica(Amorphous) B	7631-86-9		109.025	mg	150000	82908				
External Plating		11.500	mg	supplier	Matte Sn	Tin (Sn)	7440-31-5		11.499	mg	999900	8744				
				supplier	Matte Sn	Impurities	n/a		0.001	mg	100	1				