



## Materials Declaration Form

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


Supplier Information			
<b>Company Name *</b>	<b>STMicroelectronics</b>	<b>Response Date *</b>	<b>2021-12-08</b>
<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>	<b>MDG MD CHAMPION</b>	<b>Representative Title</b>	<b>MDG MD CHAMPION</b>
<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>	<b>true</b>	<b>Legal Declaration *</b>	<b>Standard</b>
<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
STM32L412KBT6	705V*464XXXA	A	998Z	2021-12-08
	Amount	UoM	Unit type	ST ECOPACK Grade
	178.42	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 : add in comments	Tin (Sn), immersion	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFP	7x7x1.4	32	L bend	
Comment	Package : 5V LQFP 32 7x7x1.4 1 0060661			

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 - 19th January 2021				
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	705V*464XXXA				6000000.0	999996.4
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	7.074	mg	supplier	die	Silicon (Si)	7440-21-3		6.800	mg	961267	38112
				supplier	metallization	Aluminium (Al)	7429-90-5		0.013	mg	1838	73
				supplier	metallization	Copper (Cu)	7440-50-8		0.116	mg	16398	650
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.038	mg	5372	213
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	141	6
				supplier	metallization	Tungsten (W)	7440-33-7		0.001	mg	141	6
				supplier	Passivation	Silicon Nitride	12033-89-5		0.030	mg	4241	168
				supplier	Passivation	Silicon Oxide	7631-86-9		0.075	mg	10602	420
				supplier	Metals	Silver	7440-22-4		0.784	mg	815000	4397
				Glue epoxy_3230_henkel	M-011 Other inorganic materials	0.962	mg	Supplier	Plastics/polymers	2,2'-(Methylenebis(phenyleneoxymethylene))	39817-09-9	
Supplier	Organic Compounds	Dihydro-3-(tetrapropenyl)furan-2,5-dione	26544-38-7						0.029	mg	30000	162
Supplier	Organic Compounds	Epoxy resin	Proprietary						0.029	mg	30000	162
Supplier	Organic Compounds	Dodecylloxirane	3234-28-4						0.029	mg	30000	162
Supplier	Organic Compounds	Hexahydromethylphthalic anhydride	25550-51-0						0.029	mg	30000	162
Supplier	Organic Compounds	Epoxy resin modifier	Proprietary						0.029	mg	30000	162
Supplier	Metallic compounds	Copper oxide	1317-38-0						0.005	mg	5000	27
Supplier	Plastics/polymers	Epoxy Resin A	Trade Secret						2.480	mg	21000	13899
Supplier	Plastics/polymers	Epoxy Resin B	Trade Secret						2.480	mg	21000	13899
Supplier	Plastics/polymers	Phenol Resin	Trade Secret						6.613	mg	56000	37065
Encapsulation_eme-g631shq_sumitomo	M-011 Other inorganic materials	118.088	mg	Supplier	Glass	Silica(Amorphous)A	60676-86-0		92.162	mg	780450	516554
				Supplier	Glass	Silica(Amorphous)B	7631-86-9		13.618	mg	115320	76326
				Supplier	Non-metals	Carbon Black	1333-86-4		0.736	mg	6230	4123
				Supplier	Metals	Gold	7440-57-5		0.566	mg	1000000	3171
Wire_Auha3_Heraeus	Bonding Wire	0.566	mg	Supplier	Metals	Tin	7440-31-5		0.719	mg	1000000	4029
Plating Anode_Pure Tin_Asahi	M-011 Other inorganic materials	0.719	mg	Supplier	Metals	Copper	7440-50-8		46.781	mg	917140	262198
Leadframe_C7025+Ag_Hds	Copper & its alloys	51.007	mg	Supplier	Metals	Nickel	7440-02-0		1.148	mg	22500	6432
				Supplier	Glass	Silicon	7440-21-3		0.133	mg	2600	743
				Supplier	Metals	Magnesium	7439-95-4		0.059	mg	1150	329