



## Materials Declaration Form

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


Supplier Information			
<b>Company Name *</b>	<b>STMicroelectronics</b>	<b>Response Date *</b>	<b>2022-09-03</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>Material Declaration champion</b>	<b>Representative Title</b>	<b>Material Declaration champion</b>
<b>Representative Phone *</b>	Refer to Supplier Comment section		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>	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.		

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32G431K8T3 STM32G431KBT6TR	755V*468XXXX	A	998Z	2022-09-03
	Amount	UoM	Unit type	ST ECOPACK Grade
	178.74	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-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 - 8th July 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	755V*468XXX				5999999.0	999983.8				
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	8.722	mg	supplier	die	Silicon (Si)	7440-21-3		8.385	mg	961362	46912				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.016	mg	1834	90				
				supplier	metallization	Copper (Cu)	7440-50-8		0.143	mg	16395	800				
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.046	mg	5274	257				
				supplier	metallization	Titanium (Ti)	7440-32-6		0.002	mg	229	11				
				supplier	metallization	Tungsten (W)	7440-33-7		0.001	mg	115	6				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.036	mg	4127	201				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.093	mg	10663	520				
				supplier	Metals	Silver	7440-22-4		0.967	mg	815000	5412				
				Glue epoxy_3230_henkel	M-011 Other inorganic materials	1.187	mg	Supplier	Plastics/polymers	2,2'-(Methylenebis(phenyleneoxymethylene))	39817-09-9		0.036	mg	30000	199
Supplier	Organic Compounds	Dihydro-3-(tetrapropenyl)furan-2,5-dione	26544-38-7						0.036	mg	30000	199				
Supplier	Organic Compounds	Epoxy resin	Proprietary						0.036	mg	30000	199				
Supplier	Organic Compounds	Dodecyclohexane	3234-28-4						0.036	mg	30000	199				
Supplier	Organic Compounds	Hexahydromethylphthalic anhydride	25550-51-0						0.036	mg	30000	199				
Supplier	Organic Compounds	Epoxy resin modifier	Proprietary						0.036	mg	30000	199				
Supplier	Metallic compounds	Copper oxide	1317-38-0						0.006	mg	5000	33				
Encapsulation_eme-g631shq_sumitomo	M-011 Other inorganic materials	116.548	mg					Supplier	Plastics/polymers	Epoxy Resin A	Trade Secret		2.448	mg	21000	13693
								Supplier	Plastics/polymers	Epoxy Resin B	Trade Secret		2.448	mg	21000	13693
								Supplier	Plastics/polymers	Phenol Resin	Trade Secret		6.527	mg	56000	36515
				Supplier	Glass	Silica(Amorphous)A	60676-86-0		90.960	mg	780450	508895				
				Supplier	Glass	Silica(Amorphous)B	7631-86-9		13.440	mg	115320	75195				
				Supplier	Non-metals	Carbon Black	1333-86-4		0.726	mg	6230	4062				
Wire_Auha3_Heraeus	Bonding Wire	0.554	mg	Supplier	Metals	Gold	7440-57-5		0.554	mg	1000000	3100				
Plating Anode_Pure Tin_Asahi	M-011 Other inorganic materials	0.719	mg	Supplier	Metals	Tin	7440-31-5		0.719	mg	1000000	4022				
Leadframe_C194+Ag_Hds	Copper & its alloys	51.007	mg	Supplier	Metals	Copper	7440-50-8		49.589	mg	972200	277437				
				Supplier	Metals	Iron ( Fe )	7439-89-6		1.158	mg	22700	6478				
				Supplier	Metals	Zinc ( Zn )	7440-66-6		0.077	mg	1500	428				
				Supplier	Non-Metals	Phosphorus ( P )	7723-14-0		0.015	mg	300	86				
				Supplier	Metals	Silver	7440-22-4		0.166	mg	3250	927				
				JIG-R	Metals	Lead	7439-92-1		0.003	mg	50	14				