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 ***	**23-02-2023**
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: 2023.02.23
12:02:09 +08:00

Product				
Mfr Item Number	**Mfr Item Name**	**Version**	**Mfr Site**	**Date**
STM32U545RET6	705W*455ESXA	A	998Z	23-02-2023
	Amount	UoM	**Unit type**	**ST ECOPACK Grade**
	363.53	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**	
QFP	10x10	64	L bend	
Comment	Package : 5W LQFP 64 10x10x1.4 1 0051434			

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-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**	**705W*455ESXA**				6000000.0	1000004.0
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	10.137	mg	supplier	die	Silicon (Si)	7440-21-3		9.741	mg	960935	26796
				supplier	metallization	Aluminium (Al)	7429-90-5		0.044	mg	4341	121
				supplier	metallization	Copper (Cu)	7440-50-8		0.130	mg	12824	358
				supplier	metallization	Nickel (Ni)	7440-02-0		0.001	mg	99	3
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.022	mg	2170	61
				supplier	metallization	Titanium (Ti)	7440-32-6		0.006	mg	592	17
				supplier	metallization	Tungsten (W)	7440-33-7		0.001	mg	99	3
				supplier	Passivation	Silicon Nitride	12033-89-5		0.031	mg	3058	85
				supplier	Passivation	Silicon Oxide	7631-86-9		0.161	mg	15882	443
Glue Epoxy (3230)	M-011 Other inorganic materials	1.379	mg	Supplier	Metals	Silver	7440-22-4		1.124	mg	815000	3092
				Supplier	Plastics/polymers	2,2'-[Methylenebis(phenyleneoxymethylene)]b	39817-09-9		0.041	mg	30000	114
				Supplier	Organic Compounds	Dihydro-3-(tetrapropenyl)furan-2,5-dione	26544-38-7		0.041	mg	30000	114
				Supplier	Organic Compounds	Epoxy resin	Proprietary		0.041	mg	30000	114
				Supplier	Organic Compounds	Dodecyloxirane	3234-28-4		0.041	mg	30000	114
				Supplier	Organic Compounds	Hexahydromethylphthalic anhydride	25550-51-0		0.041	mg	30000	114
				Supplier	Organic Compounds	Epoxy resin modifier	Proprietary		0.041	mg	30000	114
				Supplier	Metallic compounds	Copper oxide	1317-38-0		0.007	mg	5000	19
Mold Compound (EME-G631SHQ)	M-011 Other inorganic materials	245.001	mg	Supplier	Plastics/polymers	Epoxy Resin A	Trade Secret		5.145	mg	21000	14153
				Supplier	Plastics/polymers	Epoxy Resin B	Trade Secret		5.145	mg	21000	14153
				Supplier	Plastics/polymers	Phenol Resin	Trade Secret		13.720	mg	56000	37742
				Supplier	Glass	Silica(Amorphous)A	60676-86-0		191.211	mg	780450	525989
				Supplier	Glass	Silica(Amorphous)B	7631-86-9		28.254	mg	115320	77721
				Supplier	Non-metals	Carbon Black	1333-86-4		1.526	mg	6230	4199
Wire (Au)	Bonding Wire	1.273	mg	Supplier	Metals	Gold	7440-57-5		1.273	mg	1000000	3501
Plating anode (Pure Tin)	M-011 Other inorganic materials	1.438	mg	Supplier	Metals	Tin	7440-31-5		1.438	mg	1000000	3955
Leadframe (C194+Ag)	Copper & its alloys	104.300	mg	Supplier	Metals	Copper	7440-50-8		101.400	mg	972200	278935
				Supplier	Metals	Iron	7439-89-6		2.388	mg	22900	6570
				Supplier	Metals	Zinc	7440-66-6		0.156	mg	1500	430
				Supplier	Non-Metals	Phophorus	7723-14-0		0.031	mg	300	86
				Supplier	Metals	Siliver	7440-22-4		0.323	mg	3100	889