



Materials Declaration Form

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

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	21-08-2017
Company Unique ID	NL 008751171801		
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 *	MDG MD CHAMPION	Representative Title	MDG MD 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
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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 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
STM32F411RCT7 STM32F411RCT7TR	S45W*431XXA	A	998Z	21-08-2017
Amount	UoM	Unit type	ST ECOPACK Grade	
356,56	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	10x10x1.4	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-7th July 2017				
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	S45W*431XXXXA				6000000.0	0.0
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	8,990	mg	supplier	die	Silicon (Si)	7440-21-3		8,536	mg	949499	23940
				supplier	metallization	Aluminium (Al)	7429-90-5		0,032	mg	3560	90
				supplier	metallization	Copper (Cu)	7440-50-8		0,206	mg	22914	578
				supplier	metallization	Cobalt (Co)	7440-48-4		0,001	mg	111	3
				supplier	metallization	Tantalum (Ta)	7440-25-7		0,029	mg	3226	81
				supplier	metallization	Tungsten (W)	7440-33-7		0,092	mg	10234	258
				supplier	Passivation	Silicon Nitride	12033-89-5		0,024	mg	2670	67
				supplier	Passivation	Silicon Oxide	7631-86-9		0,070	mg	7786	196
				Supplier	Metals	Silver	7440-22-4		1,537	mg	901000	4311
				Supplier	Plastics/polymers	Highly cross-linked polymer	Proprietary		0,169	mg	99000	474
Mold Compound_EME-G631SHQ_Sun	M-011 Other inorganic materials	246,329	mg	Supplier	Plastics/polymers	Epoxy Resin A	Proprietary		5,098	mg	21000	14299
				Supplier	Plastics/polymers	Epoxy Resin B	Proprietary		5,098	mg	21000	14299
				Supplier	Plastics/polymers	Phenol Resin	Proprietary		13,596	mg	56000	38130
				Supplier	Glass	Silica(Amorphous)A	60676-86-0		193,027	mg	780450	-458643
				Supplier	Glass	Silica(Amorphous)B	7631-86-9		27,997	mg	115320	78520
Wire_AG SI TYPE_MKE	Bonding Wire	0,598	mg	Supplier	Non-metals	Carbon Black	1333-86-4		1,513	mg	6230	4242
				Supplier	Metals	Silver	7440-22-4		0,574	mg	960000	1611
				Supplier	Metals	Others	Proprietary		0,024	mg	40000	67
Plating anode_Pure Tin_Nuo Nengda	M-011 Other inorganic materials	1,438	mg	Supplier	Metals	Tin	7440-31-5		1,438	mg	1000000	4033
Leadframe_C194+Ag_HDS	Copper & its alloys	97,500	mg	Supplier	Metals	Iron	7439-89-6		2,132	mg	21865	5979
				Supplier	Non-metals	Phosphorus	7723-14-0		0,071	mg	730	200
				Supplier	Metals	Zinc	7440-66-6		0,110	mg	1125	308
				Supplier	Metals	Copper	7440-50-8		89,040	mg	913235	249720
				Supplier	Metals	Silver	7440-22-4		6,143	mg	63000	17227
				JIG-R	Metals	Lead	7439-92-1		0,004	mg	45	12