



Materials Declaration Form

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

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	27-07-2017
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 *	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
Legal Statement	<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
STM32F051K6T7 STM32F051K6T7TR	S45V*440XXX1	A	998Z	27-07-2017
	Amount	UoM	Unit type	ST ECOPACK Grade
	197.06	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	7x7X1.4	#REF!	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-12th January 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	S45V*440XXX1				7000000.0	1000000.0
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	6.974	mg	supplier	die	Silicon (Si)	7440-21-3		6.689	mg	959134	33945
				supplier	metallization	Aluminium (Al)	7429-90-5		0.019	mg	2724	96
				supplier	metallization	Copper (Cu)	7440-50-8		0.097	mg	13909	492
				supplier	metallization	Cobalt (Co)	7440-48-4		0.018	mg	2581	91
				supplier	metallization	Titanium (Ti)	7440-32-6		0.005	mg	717	25
				supplier	metallization	Tungsten (W)	7440-33-7		0.011	mg	1577	56
				supplier	Passivation	Silicon Nitride	12033-89-5		0.013	mg	1864	66
				supplier	Passivation	Silicon Oxide	7631-86-9		0.122	mg	17494	619
Die Attach Epoxy_ABLEBOND 3230_H	M-011 Other inorganic materials	0.896	mg	Supplier	Metals	Silver	7440-22-4		0.807	mg	901000	4095
				Supplier	Plastics/polymers	Highly cross-linked polymer	Proprietary		0.089	mg	99000	450
Silicon Die	M-011 Other inorganic materials	6.689	mg	Supplier	Glass	Silicon	7440-21-3		6.689	mg	1000000	33945
Mold Compound_EME-G631SHQ_Sur	M-011 Other inorganic materials	111.495	mg	Supplier	Plastics/polymers	Epoxy Resin A	Proprietary		2.488	mg	21000	12625
				Supplier	Plastics/polymers	Epoxy Resin B	Proprietary		2.488	mg	21000	12625
				Supplier	Plastics/polymers	Phenol Resin	Proprietary		6.634	mg	56000	33667
				Supplier	Glass	Silica(Amorphous)A	60676-86-0		85.485	mg	780450	433812
				Supplier	Glass	Silica(Amorphous)B	7631-86-9		13.662	mg	115320	69330
				Supplier	Non-metals	Carbon Black	1333-86-4		0.738	mg	6230	3745
Wire_AG SI TYPE_MKE	Bonding Wire	0.253	mg	Supplier	Metals	Silver	7440-22-4		0.243	mg	960000	1233
				Supplier	Metals	Others	Proprietary		0.010	mg	40000	51
Plating anode_Pure Tin_Nuo Nengda	M-011 Other inorganic materials	1.209	mg	Supplier	Metals	Tin	7440-31-5		1.209	mg	1000000	6136
Leadframe_C9+Ag_HDS	Copper & its alloys	69.540	mg	Supplier	Metals	Iron	7439-89-6		1.520	mg	21865	7716
				Supplier	Non-metals	Phosphorus	7723-14-0		0.051	mg	730	258
				Supplier	Metals	Zinc	7440-66-6		0.078	mg	1125	397
				Supplier	Metals	Copper	7440-50-8		63.506	mg	913235	322277
				Supplier	Metals	Silver	7440-22-4		4.381	mg	63000	22232
				JIG-R	Metals	Lead	7439-92-1		0.003	mg	45	16