




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 *	2017-07-11
Company Unique ID	NL 008751171B01		
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	MDG MD CHAMPION	Representative Title	MDG MD CHAMPION
Representative Phone *	Refer to Supplier Comment section		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
STM32F398VET6	P31L*446XXXY	A	9998	2017-07-11
	Amount	UoM	Unit type	ST ECOPACK Grade
	681.44	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	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFP	14x14x1.4	100	L Bend	
Comment	Package : 1L LQFP 100 14x14x1.4 1 0086901			

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	P31L*446XXY				6000001.0	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	22.597	mg	supplier	die	Silicon (Si)	7440-21-3		21.674	mg	959154	31806				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.063	mg	2788	92				
				supplier	metallization	Copper (Cu)	7440-50-8		0.313	mg	13851	459				
				supplier	metallization	Cobalt (Co)	7440-48-4		0.058	mg	2567	85				
				supplier	metallization	Titanium (Ti)	7440-32-6		0.017	mg	752	25				
				supplier	metallization	Tungsten (W)	7440-33-7		0.034	mg	1505	50				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.041	mg	1814	60				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.397	mg	17569	583				
				LEADFRAME	M-011 Other inorganic materials	155.426	mg	supplier	ALLOY	Copper (Cu)	7440-50-8		147.008	mg	945839	215731
								supplier	ALLOY	Iron (Fe)	7439-89-6		3.621	mg	23297	5314
supplier	ALLOY	Phosphorous (P)	7723-14-0						0.045	mg	290	66				
supplier	ALLOY	Zinc (Zn)	7440-66-6						0.181	mg	1165	266				
supplier	COATING	Nickel (Ni)	7440-02-0						4.431	mg	28509	6502				
supplier	COATING	Palladium (Pd)	7440-05-3						0.094	mg	605	138				
supplier	COATING	Gold (Au)	7440-57-5						0.046	mg	296	68				
DIE ATTACH	M-011 Other inorganic materials	2.904	mg	supplier	GLUE	Silver (Ag)	7440-22-4		2.033	mg	700069	2983				
				supplier	GLUE	Silica	Proprietary		0.436	mg	150138	640				
				supplier	GLUE	Epoxy resin A	9003-36-5		0.087	mg	29959	128				
				supplier	GLUE	Epoxy resin B	Proprietary		0.145	mg	49931	213				
				supplier	GLUE	Diluent	Proprietary		0.145	mg	49931	213				
				supplier	GLUE	Hardener	Proprietary		0.058	mg	19972	85				
BONDING WIRE	M-011 Other inorganic materials	1.534	mg	supplier	BONDING WIRE	Gold (Au)	7440-57-5		1.533	mg	999348	2250				
				supplier	BONDING WIRE	Palladium (Pd)	7440-05-3		0.001	mg	652	1				
ENCAPSULATION	M-011 Other inorganic materials	498.220	mg	supplier	MOLDING COMPOUND	Epoxy resin	Proprietary		49.860	mg	100637	73169				
				supplier	MOLDING COMPOUND	Silica fused (SiO2)	60676-86-0		418.444	mg	838981	-385941				
				supplier	MOLDING COMPOUND	Phenol Resin	Proprietary		27.423	mg	55350	40243				
				supplier	MOLDING COMPOUND	Carbon Black	1333-86-4		2.493	mg	5032	3658				
FINISHING	M-011 Other inorganic materials	0.759	mg	supplier	COATING	Nickel (Ni)	7440-02-0		0.739	mg	973650	1084				
				supplier	COATING	Palladium (Pd)	7440-05-3		0.016	mg	21080	23				
				supplier	COATING	Gold (Au)	7440-57-5		0.004	mg	5270	6				