



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 *	28-07-2017
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
STM32L431KBU3	S7MG*435XXXZ	A	998Z	28-07-2017
	Amount	UoM	Unit type	ST ECOPACK Grade
	49,55	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	
QFN	5X5X0.55	32	No lead	
Comment	Package : A0B8 UFQFPN 5X5X0.55 32L 0.5 MM PITCH 8202208			

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	57MG*435XXXZ				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	18,474	mg	Supplier	die	Silicon (Si)	7440-21-3		18,134	mg	981596	365956				
				Supplier	metallization	Aluminium (Al)	7429-90-5		0,016	mg	866	323				
				Supplier	metallization	Copper (Cu)	7440-50-8		0,144	mg	7795	2906				
				Supplier	metallization	Tantalum (Ta)	7440-25-7		0,047	mg	2544	948				
				Supplier	metallization	Titanium (Ti)	7440-32-6		0,002	mg	108	40				
				Supplier	metallization	Tungsten (W)	7440-33-7		0,001	mg	54	20				
				Supplier	Passivation	Silicon Nitride	12033-89-5		0,037	mg	2003	747				
				Supplier	Passivation	Silicon Oxide	7631-86-9		0,093	mg	5034	1877				
				Supplier	Metals	Silver	7440-22-4		0,672	mg	704535	13568				
				Supplier	Plastics/polymers	Bisphenol-F, epoxy resin	9003-36-5		0,046	mg	48437	933				
Die Attach Epoxy_ABLEBOND 8290_H	M-011 Other inorganic materials	0,954	mg	Supplier	Plastics/polymers	Fatty acids, polymers with epichlorohydrin	68475-94-5		0,046	mg	48437	933				
				Supplier	Polymers	Gamma Butyrolactone	96-48-0		0,046	mg	48437	933				
				Supplier	Epoxy Resin	Epoxy Resin Proprietary	Proprietary		0,046	mg	48437	933				
				Supplier	Amines	Poly(Oxy(methyl-1, 2-ethanediyl)	9046-10-0		0,046	mg	48437	933				
				Supplier	Metallic compounds	Copper Oxide	1317-38-0		0,046	mg	48437	933				
				Supplier	Organic Compounds	1,4-Bis(2,3-epoxypropoxy) butane	2425-79-8		0,005	mg	4844	93				
				Mold Compound_EME-G770_Sumitor	M-011 Other inorganic materials	1,393	mg	Supplier	Plastics/polymers	Epoxy Resin A	Proprietary		0,324	mg	19837	6548
								Supplier	Plastics/polymers	Epoxy Resin B	Proprietary		0,324	mg	19837	6548
								Supplier	Plastics/polymers	Phenol Resin A	Proprietary		0,324	mg	19837	6548
								Supplier	Plastics/polymers	Phenol Resin B	Proprietary		0,324	mg	19837	6548
Supplier	Glass	Silica (Amorphous) A	60676-86-0						-2,983	mg	732452	-1060200				
Supplier	Glass	Silica (Amorphous) B	7631-86-9						2,662	mg	162767	53726				
Supplier	Metallic compounds	Metal Hydroxide	Proprietary						0,324	mg	19837	6548				
Supplier	Additives	Carbon Black	1333-86-4						0,092	mg	5595	1847				
Bonding wire_WIRE AG Si TYPE_MKE	Bonding Wire	0,153	mg	Supplier	Metals	Silver	7440-22-4		0,147	mg	960000	2971				
				Supplier	Metals	Others	Proprietary		0,006	mg	40000	124				
				Supplier	Metals	Tin	7440-31-5		1,578	mg	1000000	31840				
Anode Ball_Pure Tin_Nuonengda	M-011 Other inorganic materials	1,578	mg	Supplier	Metals	Nickel	7440-02-0		0,793	mg	29365	16000				
				Supplier	Glass	Silicon	7440-21-3		0,176	mg	6500	3542				
				Supplier	Metals	Magnesium	7439-95-4		0,042	mg	1565	853				
				Supplier	Metals	Silver	7440-22-4		1,701	mg	63000	34327				
Lead frame_C7+Ag_HDS	Copper & its alloys	27,000	mg	Supplier	Metals	Copper	7440-50-8		24,288	mg	899570	490156				