




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 *	19-02-2018
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
STM8AF6223PDU	X3YA*79JX10A	A	9998	19-02-2018
	Amount	UoM	Unit type	ST ECOPACK Grade
	72.00	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
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	NiPdAu	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
TSSOP20	NAC	20		
Comment	Package : YA TSSOP 20 BODY 4.4 PITCH 0.65 0087225			

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	X3YA*79JX10A				7000000.0	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	1.975	mg	supplier	die	Silicon (Si)	7440-21-3		1.893	mg	958481	26292
				supplier	metallization	Aluminium (Al)	7429-90-5		0.007	mg	3544	97
				supplier	metallization	Copper (Cu)	7440-50-8		0.024	mg	12152	333
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.003	mg	1519	42
				supplier	metallization	Titanium (Ti)	7440-32-6		0.004	mg	2025	56
				supplier	Passivation	Silicon Nitride	12033-89-5		0.006	mg	3038	83
Lead-frame	M-011 Other inorganic materials	37.695	mg	supplier	alloy	Copper (Cu)	7440-50-8		36.732	mg	974442	510167
				supplier	alloy	Iron (Fe)	7439-89-6		0.886	mg	23513	12310
				supplier	alloy	Zinc (Zn)	7440-66-6		0.045	mg	1203	630
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.032	mg	842	441
Lead-frame Coating	M-011 Other inorganic materials	0.219	mg	supplier	coating	Nickel (Ni)	7440-02-0		0.201	mg	916800	2786
				supplier	coating	Palladium (Pd)	7440-05-3		0.013	mg	58700	178
				supplier	coating	Gold (Au)	7440-57-5		0.005	mg	24500	74
Die Attach	M-011 Other inorganic materials	1.472	mg	supplier	glue or soft solder	Silver (Ag)	7440-22-4		1.178	mg	800000	16360
				supplier	glue or soft solder	Epoxy resin (molecular weight <= 700g)	9003-36-5		0.118	mg	80000	1636
				supplier	glue or soft solder	Epoxy resin	68475-94-5		0.044	mg	30000	614
				supplier	glue or soft solder	2,6-Diglycidyl phenyl allyl ether oligomer	CE 417-470-1		0.044	mg	30000	614
				supplier	glue or soft solder	Lactone	Proprietary		0.044	mg	30000	614
Wires	M-011 Other inorganic materials	0.292	mg	supplier	glue or soft solder	Polyoxypropylenediamine	9046-10-0		0.044	mg	30000	614
				supplier	Bonding wire	Gold (Au)	7440-57-5		0.292	mg	1000000	4051
Encapsulation	M-011 Other inorganic materials	30.345	mg	supplier	Moulding Compound	Epoxy Resin	Proprietary		2.224	mg	73301	30893
				supplier	Moulding Compound	Phenol Resin	Proprietary		1.483	mg	48867	20595
				supplier	Moulding Compound	Silica, vitreous	60676-86-0		26.371	mg	869036	366257
				supplier	Moulding Compound	Carbon-black	1333-86-4		0.148	mg	4887	2060
Finishing	M-011 Other inorganic materials	0.002	mg	supplier	Bismuth/Bismuth Compounds	Bismuth	7440-69-9		0.119	mg	3909	1648
				supplier	connections coating	Nickel (Ni)	7440-02-0		0.002	mg	916800	28
				supplier	connections coating	Palladium (Pd)	7440-05-3		0.000	mg	58700	2
				supplier	connections coating	Gold (Au)	7440-57-5		0.000	mg	24500	1