



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 *	2016-07-22
Contact Name *	Refer to "Supplier Comment" section	Contact Title	Refer to "Supplier Comment" section
Contact Phone *	Refer to "Supplier Comment" section	Contact Email *	Refer to "Supplier Comment" section
Authorized Representative *	Patrick Crudo	Representative Title	MMS MD CHAMPION
Representative Phone *	(+33) 442 688 339	Representative Email *	patrick.crudo@st.com
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/web/en/support/online_tech_support.html		

Uncertainty Statement

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Legal Statement

Supplier Acceptance * true **Legal Declaration *** Standard

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
STM32F429NGH6	U4RM*419XXX3	A	959	2016-07-22
Amount		UoM	Unit type	ST ECOPACK Grade
407.00		mg	Each	ECOPACK® 2

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
3	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Tin/Silver/Copper (Sn/Ag/Cu)	NAC		



Package Designator	Size	Nbr of instances	Shape	
BGA	13x13x1.2	216	NAC	
Comment	TFBGA 13x13x1.2 216L P 0.8MM			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	true
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
Product(s) meets EU RoHS requirements by application of the selected exemption(s)	false
Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Product(s) is obsolete, no information is available	false
Product(s) is unknown, no information is available	false
Exemption Id.	Description

QueryList : REACH-20th June 2016				
Query				Response
The product 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						Mfr Item Name	U4RM*419XX3					
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	Other inorganic materials	17.330	mg	supplier	die	Silicon (Si)	7440-21-3		13.925	mg	803520	34214
Die or Dies					metallization	Aluminium (Al)	7429-90-5		0.082	mg	4732	201
Die or Dies					metallization	Copper (Cu)	7440-50-8		0.535	mg	30871	1314
Die or Dies					metallization	Tantalum (Ta)	7440-25-7		2.301	mg	132776	5654
Die or Dies					metallization	Cobalt (Co)	7440-48-4		0.002	mg	115	5
Die or Dies					metallization	Tungsten (W)	7440-33-7		0.241	mg	13907	592
Die or Dies					passivation	Silicon Nitride (SiN)	68034-42-4		0.063	mg	3635	155
Die or Dies					passivation	Silicon Oxide(SiO2)	7631-86-9		0.181	mg	10444	445
Substrate core+ fiber glass	Other inorganic materials	35.490	mg	supplier	core+ fiber glass	Bismaleimide (B)	13676-54-5		5.235	mg	147500	12862
Substrate core+ fiber glass					core+ fiber glass	Triazine (T)	25722-66-1		5.235	mg	147500	12862
Substrate core+ fiber glass					core+ fiber glass	Fiber glass	65997-17-3		15.616	mg	440000	38368
Substrate core+ fiber glass					core+ fiber glass	metal hydroxide	21645-51-2		0.355	mg	10000	872
Substrate core+ fiber glass					core+ fiber glass	Zinc hydroxide	20427-58-1		0.106	mg	3000	262
Substrate core+ fiber glass					core+ fiber glass	Thermosetting resin	na		8.766	mg	247000	21538
Substrate core+ fiber glass					core+ fiber glass	Calcium sulfate	7778-18-9		0.177	mg	5000	436
Substrate solder mask	Other inorganic materials	8.125	mg	supplier	solder mask	Baryum sulfate	7727-43-7		1.681	mg	206897	4130
Substrate solder mask					solder mask	(2-methoxymethylethoxy)propanol	34590-94-8		0.280	mg	34483	688
Substrate solder mask					solder mask	Talc containing no asbestiform fibers	14807-96-6		0.934	mg	114943	2295
Substrate solder mask					solder mask	Quartz	14808-60-7		0.934	mg	114943	2295
Substrate solder mask					solder mask	Acrylates derivative	407-47-6		3.866	mg	475862	9499
Substrate solder mask					solder mask	aromatic hydrocarbon	na		0.374	mg	45977	918
Substrate solder mask					solder mask	amine compound	na		0.056	mg	6897	138
Substrate coating	Other inorganic materials	67.785	mg	supplier	coating	Copper (Cu)	7440-50-8		67.098	mg	989864	164861
Substrate coating					coating	Nickel (Ni)	7440-02-0		0.543	mg	8014	1335
Substrate coating					coating	Gold (Au)	7440-57-5		0.144	mg	2122	353
Die Attach	Other inorganic materials	3.442	mg	supplier	glue or tape	Silver (Ag)	7440-22-4		3.057	mg	888000	7510
Die Attach					glue or tape	Neopentyl glycol dimethacrylate	1985-51-9		0.172	mg	50000	423
Die Attach					glue or tape	2,6-Diglycidyl phenyl allyl ether	EC 417-470-1		0.189	mg	55000	465
Die Attach					glue or tape	2,6-diglycidylphenyl allyl ether oligomer	Proprietary		0.003	mg	1000	8
Die Attach					glue or tape	palmitic acid	57-10-3		0.003	mg	1000	8
Die Attach					glue or tape	4-tert-butylcyclohexanol	98-52-2		0.010	mg	3000	25
Die Attach					glue or tape	2,6,10,15,19,23-hexamethyltetracosane-2,6,10,14	111-02-4		0.003	mg	1000	8
Die Attach					glue or tape	Polyimide resin	Proprietary		0.003	mg	1000	8
Wires	Other inorganic materials	1.156	mg	supplier	Bonding wire	Gold (Au)	7440-57-5		1.145	mg	990000	2812
Wires					Bonding wire	Palladium (Pd)	7440-05-3		0.012	mg	10000	28
Encapsulation	Other inorganic materials	237.304	mg	supplier	Moulding Compound	Biphenyl epoxy resin	85954-11-6		24.064	mg	101408	59126
Encapsulation					Moulding Compound	Phenol resin	205830-20-2		12.032	mg	50704	29563
Encapsulation					Moulding Compound	Quartz	14808-60-7		6.016	mg	25352	14782
Encapsulation					Moulding Compound	Silica, vitreous	60676-86-0		192.784	mg	812396	473672
Encapsulation					Moulding Compound	Carbon Black	1333-86-4		2.166	mg	9127	5321
Encapsulation					Moulding Compound	Magnesium dihydroxide	1309-42-8		0.241	mg	1014	591
Solder Balls	Other inorganic materials	36.368	mg	supplier	solder	Tin (Sn)	7440-31-5		35.044	mg	963600	86103
Solder Balls					solder	Silver (Ag)	7440-22-4		1.091	mg	30000	2681
Solder Balls					solder	Copper (Cu)	7440-50-8		0.218	mg	6000	536
Solder Balls					solder	Nickel (Ni)	7440-02-0		0.011	mg	300	27
Solder Balls					solder	Lead (Pb)	7439-92-1		0.004	mg	100	9