

Materials Declaration Form

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

Supplier Information								
Company Name *	STMicroelectronics	Response Date *	2014-08-05					
Contact Name *	Refer to " Supplier Comment" section	to "Supplier Comment" section Contact Title Refer to "Supplier Comment" section						
Contact Phone *	Refer to " Supplier Comment" section	er to " Supplier Comment" section Contact Email * Refer to " Supplier Comment" section						
Authorized Representative *	Antonella Lanzafame	Representative Title	AMS & IPD Materials Declaration Champion					
Representative Phone *	Refer to " Supplier Comment" section	er to "Supplier Comment" section Representative Email * Refer to "Supplier Comment" section						
Supplier Comment	Inline Technical Support - STMicroelectronics : http://www.st.com/internet/com/support/online_tech_support.jsp							

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 omprehensive 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					
	BGDP*TD4N28H	А	Z8GA	2014-08-05					
	Amount	UoM	Unit type	ST ECOPACK Grade					
	320.00	mg	Each	ECOPACK® 2					

Manufacturing information									
J-STD-020 MSL Rating									
1	260	3							
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	life.augmented					
Not Applicable; if coating is used o	Tin (Sn), matte	Copper Alloy		meradginemed					

Package Designator	Size	Nbr of instances	Shape	
SIP	6.5,6.1,2.3	3	gull wing	
Comment	TO 252 DPAK; MD valid for CP:TN815-8	BOOB-TR.		

QueryList: ROHS directive 2011/65/EU _ July 2011								
	Query Respons							
Product(s) meets EU RoHS requirement v	vithout any exemptions	false						
Product(s) meets EU RoHS requirements	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)							
Product(s) meets EU RoHS requirements by application of the selected exemption(s) false								
Product(s) does not meet EU RoHS requir	rements and is not under exemptions	false						
Product(s) is obsolete, no information is a	Product(s) is obsolete, no information is available false							
Product(s) is unknown, no information is available								
Exemption Id.	Exemption Id. Description							
7 a	7a Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)							

QueryList: REACH-16th June 2014								
Query								
The product does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH								
CategoryLevel_Name	CategoryLevel_Name CategoryLevel_Threshold amount in product (mg) Application							

Material Composition Declaration			Mfr Item Name	BGDP*1	TD4N28H							
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Silicon die	Other inorganic materials	3.147	mg	supplier	Silicon die	Silicon (Si)	7440-21-3		2.997	mg	952336	9366
Silicon die				supplier	Silicon die	Aluminium (Al)	7429-90-5		0.087	mg	27645	272
Silicon die				supplier	passivation	Alumina	1344-28-1		0.006	mg	1907	19
Silicon die				JIG - R	passivation	Lead silicate Glass	65997-18-4	7c-I-Electrical and	0.013	mg	4131	41
Silicon die				supplier	backside metallization	Aluminium (Al)	7429-90-5		0.015	mg	4766	47
Silicon die				supplier	backside metallization	Gold (Au)	7440-57-5		0.005	mg	1589	16
Silicon die				supplier	backside metallization	Nickel (Ni)	7440-02-0		0.024	mg	7626	75
Leadframe	Copper and its alloy	155.502	mg	supplier	Alloy	Copper(CU)	7440-50-8		155.299	mg	998695	485309
Leadframe				supplier	Alloy	Iron(Fe)	7439-89-6		0.156	mg	1003	488
Leadframe				supplier	Alloy	Iron Phosphide (FeP)	26508-33-8		0.047	mg	302	147
Die Attach	Other Organic Material	1.613	mg	supplier	Soft Solder	Tin(Sn)	7440-31-5		0.032	mg	19839	100
Die Attach				supplier	Soft Solder	Silver(Ag)	7440-22-4		0.04	mg	24799	125
Die Attach				JIG - R	Soft Solder	Lead	7439-92-1	7a-Lead in high me	1.541	mg	955363	4816
Bonding wire	Other Inorganic Material	2.823	mg	supplier	Bonding wire	Aluminum(Al)	7429-90-5		2.823	mg	1000000	8822
Encapsulation	Other Organic Material	154.226	mg	supplier	Molding compound	Silica fused	60676-86-0		135.719	mg	880001	424122
Encapsulation				supplier	Molding compound	Epoxy resin	proprietary		13.109	mg	84999	40966
Encapsulation				supplier	Molding compound	Phenolic resin	proprietary		4.627	mg	30001	14459
Encapsulation				supplier	Molding compound	Mixed siloxanes	proprietary		0.54	mg	3501	1688
Encapsulation				supplier	Molding compound	Pigment	proprietary		0.231	mg	1498	722
Finishing	Other Inorganic Material	2.689	mg	supplier	Connection Coating	Tin(Sn)	7440-31-5		2.689		1000000	8403
												0