



Materials Declaration Form

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

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2014-01-09
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 *	Antonella Lanzafame	Representative Title	AMS & IPD Materials Declaration 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/internet/com/support/online_tech_support.jsp		

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
	HY42*UM90J51	A	SA1A	2014-01-09
Amount	UoM	Unit type	ST ECOPACK Grade	
73.90	mg	Each	ECOPACK® 2	

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	
Not Applicable ; if coating is used o	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFP	5.0,5.0,0.9	32	flat	
Comment	VFQFPN 5X5x1.0 32L PITCH 0.5; MD valid for CP: LNBH23QTR.			

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 2013				
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	HY42*UM90J51					
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	4.924	mg	supplier	Die	Silicon (Si)	7440-21-3		4.664	mg	947197	63112
Silicon die				supplier	metallization	Aluminium (Al)	7429-90-5		0.048	mg	9748	650
Silicon die				supplier	metallization	Tungsten (W)	7440-33-7		0.038	mg	7717	514
Silicon die				supplier	metallization	Silicon Nitride (SiN)	68034-42-4		0.01	mg	2031	135
Silicon die				supplier	metallization	Silicon Oxide (SiO2)	7631-86-9		0.082	mg	16653	1110
Silicon die				supplier	passivation	Gamma-butyrolactone	96-48-0		0.027	mg	5483	365
Silicon die				supplier	passivation	Polyhydroxyamide	55295-98-2		0.012	mg	2437	162
Silicon die				supplier	Alloy	Alcoxysilane	proprietary		0.001	mg	203	14
Silicon die				supplier	Alloy	Chromium (Cr)	7440-47-3		0.003	mg	609	41
Silicon die				supplier	Alloy	Gold (Au)	7440-57-5		0.009	mg	1828	122
Silicon die				supplier	Alloy	Nickel (Ni)	7440-02-0		0.028	mg	5686	379
Silicon die				supplier	Alloy	Vanadium (V)	7440-62-2		0.002	mg	406	27
Lead frame	Copper & its alloys	34.091	mg	supplier	Alloy	Copper	7440-50-8		32.929	mg	965915	445589
Lead frame				supplier	Alloy	Iron	7439-89-6		0.769	mg	22557	10406
Lead frame				supplier	Alloy	Lead	7439-92-1		0.001	mg	29	14
Lead frame				supplier	Alloy	Phosphorus	7723-14-0		0.008	mg	235	108
Lead frame				supplier	Alloy	Zinc	7440-66-6		0.043	mg	1261	582
Lead frame				supplier	Alloy	Silver	7440-22-4		0.341	mg	10003	4614
Die attach	Other Organic Materials	0.845	mg	supplier	Glue	Silver (60~100%)	7440-22-4		0.598	mg	707692	8092
Die attach				supplier	Glue	Carbocyclic Acrylate (10~30%)	Proprietary		0.169	mg	200000	2287
Die attach				supplier	Glue	Bismaleimide resin	Proprietary		0.026	mg	30769	352
Die attach				supplier	Glue	Acrylate (1~5%)	Proprietary		0.026	mg	30769	352
Die attach				supplier	Glue	Additive (1~5%)	Proprietary		0.026	mg	30769	352
Bonding wire	Other inorganic materials	0.741	mg	supplier	Bonding wire	Gold (Au)	7440-57-5		0.741	mg	1000000	10027
Encapsulation	Other Organic Materials	32.928	mg	supplier	Molding compound	Silica fused	60676-86-0		30.853	mg	936984	417497
Encapsulation				supplier	Molding compound	Epoxy resin	Proprietary		0.988	mg	30005	13369
Encapsulation				supplier	Molding compound	Phenol resin	Proprietary		0.988	mg	30005	13369
Encapsulation				supplier	Molding compound	Carbon black	1333-86-4		0.099	mg	3007	1340
Finishing	Other inorganic materials	0.371	mg	supplier	Connection coating	Sn	7440-31-5		0.371	mg	1000000	5020