



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 *	2013-01-17
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 *	Patrizia Santoro	Representative Title	AMS IPD 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/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
	TSX9*5H32A5Y	A	SA1A	2013-01-17
Amount	UoM	Unit type	ST ECOPACK Grade	
35.00	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable ; if coating is used o	Tin (Sn), matte, annealed	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
QFN	3.3,3.3,1	8	No lead	
Comment	VFQFPN Power Flat 8L 3.3x3.3			

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-18 June 2012				
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	TSX9*5H32A5Y					
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	1.171	mg	supplier	Silicon die	Silicon (Si)	7440-21-3		1.143	mg	976089	32657
Silicon Die				supplier	Die metallization	Aluminium (Al)	7429-90-5		0.002	mg	1708	57
Silicon Die				supplier	Die metallization	Titanium (Ti)	7440-32-6		0.001	mg	854	29
Silicon Die				supplier	Die metallization	Gold (Au)	7440-57-5		0.004	mg	3416	114
Silicon Die				supplier	Die metallization	Nickel (Ni)	7440-02-0		0.021	mg	17933	600
Leadframe	Copper & its alloys	14.934	mg	supplier	Alloy	Copper	7440-50-8		14.426	mg	965984	412171
Leadframe				supplier	Alloy	Iron	7439-89-6		0.337	mg	22566	9629
Leadframe				supplier	Alloy	Phosphorus	7723-14-0		0.003	mg	201	86
Leadframe				supplier	Alloy	Zinc	7440-66-6		0.019	mg	1272	543
Leadframe				supplier	Alloy	Silver	7440-22-4		0.149	mg	9977	4257
Die Attach	Other Organic Materials	0.284	mg	supplier	Glue	Silver	7440-22-4		0.23	mg	809859	6571
Die Attach				supplier	Glue	Carbocyclic Acrylate	Proprietary		0.029	mg	102113	829
Die Attach				supplier	Glue	Bismaleimide resin	Proprietary		0.008	mg	28169	229
Die Attach				supplier	Glue	2-preponoic acid, 2-methyl	68586-19-6		0.008	mg	28169	229
Die Attach				supplier	Glue	Additive (1~5%)	Proprietary		0.008	mg	28169	229
Die Attach				supplier	Glue	Dicumlyl peroxide (0.1 - 1.0)	80-43-3		0.001	mg	3521	29
Bonding wire	Precious metals	0.561	mg	supplier	Bonding wire	Gold (Au)	7440-57-5		0.561	mg	1000000	16029
Encapsulation	Other Organic Materials	17.478	mg	supplier	Molding compound	Silica fused	60676-86-0		16.377	mg	937007	467914
Encapsulation				supplier	Molding compound	Epoxy resin	Proprietary		0.524	mg	29981	14971
Encapsulation				supplier	Molding compound	Phenol resin	Proprietary		0.524	mg	29981	14971
Encapsulation				supplier	Molding compound	Carbon black	1333-86-4		0.053	mg	3032	1514
Finishing	Solder	0.572	mg	supplier	Connection coating	Sn	7440-31-5		0.572	mg	1000000	16343