



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 *	2014-11-17
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 *	Giovanni Giacopello	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
	HMDS*Z45S01Y	A	BO2A	2014-11-17
Amount	UoM	Unit type	ST ECOPACK Grade	
27000.00	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
NAC	NAC	NAC		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable ; if coating is used o	Nickel (Ni)	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
	38 - 24 - 12			
Comment	Package: ISOT4D-DBC-RA-VIS; MDF valid for STPS12045TV; STPS16045TV			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	false
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)	true
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
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				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	HMDS*Z45S01Y					
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	36.714	mg	Supplier	Silicon die	Silicium (Si)	7440-21-3		35.148	mg	957346	1302
Silicon Die				Supplier	die metallization	Titanium (Ti)	7440-32-6		0.05	mg	1362	2
Silicon Die				Supplier	die metallization	Nickel (Ni)	7440-02-0		0.291	mg	7926	11
Silicon Die				Supplier	die metallization	Gold (Au)	7440-57-5		0.051	mg	1389	2
Silicon Die				Supplier	die metallization	Aluminum (Al)	7429-90-5		1.174	mg	31977	43
Lead-frame	Copper & its alloys	8266.136	mg	Supplier	alloy	Copper (Cu)	7440-50-8		8248.934	mg	997919	305516
Lead-frame				Supplier	alloy	Phosphorus (P)	12185-10-3		8.257	mg	999	306
Lead-frame				Supplier	metallization	Nickel (Ni)	7440-02-0		8.309	mg	1005	308
Lead-frame				Supplier	metallization	Phosphorus (P)	12185-10-3		0.636	mg	77	24
Soft solder	Solder	199.995	mg	R	Solder	Lead (Pb)	7439-92-1	7a-Lead in high me	186.995	mg	934998	6926
Soft solder				Supplier	Solder	Silver (Ag)	7440-22-4		3	mg	15000	111
Soft solder				Supplier	Solder	Tin (Sn)	7440-31-5		10	mg	50001	370
Insulator	Other inorganic materials	190.599	mg	Supplier	ceramic	Nickel (Ni)	7440-02-0		2.287	mg	11999	85
Insulator				Supplier	ceramic	Phosphorus (P)	12185-10-3		0.172	mg	902	6
Insulator				Supplier	ceramic	Manganese (Mn)	7439-96-5		7.433	mg	38998	275
Insulator				Supplier	ceramic	Titanium (Ti)	7440-32-6		0.781	mg	4098	29
Insulator				Supplier	ceramic	Molybdenum oxide	1313-27-5		9.53	mg	50000	353
Insulator				Supplier	ceramic	Alumina (Al2O3)	1344-28-1		170.396	mg	894003	6311
Screw	Other inorganic materials	7360	mg	Supplier	screw	Iron (Fe)	7439-89-6		7360	mg	1000000	272593
Nut	Other inorganic materials	1061.9	mg	Supplier	nut	Nickel (Ni)	7440-02-0		1061.9	mg	1000000	39330
Bonding wire	Other inorganic materials	2.447	mg	Supplier	wire	Aluminum(Al)	7429-90-5		2.447	mg	1000000	91
Connection isotop	Other inorganic materials	4599.535	mg	Supplier	connection	Copper (Cu)	7440-50-8		4598.436	mg	999761	170312
Connection isotop				Supplier	connection coating	Nickel (Ni)	7440-02-0		1.031	mg	224	38
Connection isotop				Supplier	connection coating	Phosphorus (P)	12185-10-3		0.068	mg	15	3
Encapsulation	Other inorganic materials	5175.069	mg	Supplier	Molding compound	Silica, vitreous	60676-86-0		4502.31	mg	870000	166752
Encapsulation				Supplier	Molding compound	Epoxy resin	Proprietary		517.507	mg	100000	19167
Encapsulation				Supplier	Molding compound	Phenol resin	Proprietary		129.377	mg	25000	4792
Encapsulation				Supplier	Molding compound	Carbon Black	1333-86-4		25.875	mg	5000	958
Finishing	Other inorganic materials	107.605	mg	Supplier	connection coating	Nickel (Ni)	7440-02-0		107.605	mg	1000000	3985