



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 *	2014-06-27
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/web/en/support/online_tech_support.html		

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
	TSIK*EZ51B6F	A	Z8GA	2014-06-27
Amount	UoM	Unit type	ST ECOPACK Grade	
310.00	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	Tin (Sn), matte, annealed	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
DIP	6.1 - 6.5 - 2.3	3	Through-hole	
Comment	Package: IPAK TO-251; MDF valid for STD4NK50Z-1			

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 December 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	TSIK*E251B6F					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
die (s)	Other inorganic materials	3.298	mg	supplier	die	Silicon (Si)	7440-21-3		3.184	mg	965434	10271
die (s)				supplier	metallization	Aluminium (Al)	7429-90-5		0.046	mg	13948	148
die (s)				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.015	mg	4548	48
die (s)				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.024	mg	7277	77
die (s)				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.002	mg	606	6
die (s)				supplier	back side metallization	Silver(Ag)	7440-22-4		0.005	mg	1516	16
die (s)				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.022	mg	6671	71
Lead-frame	Other inorganic materials	148.846	mg	Supplier	Alloy	Copper (Cu)	7440-50-8		148.536	mg	997917	479148
Lead-frame				Supplier	Alloy	Iron (Fe)	7439-89-6		0.149	mg	1001	481
Lead-frame				Supplier	Alloy	Phosphorus (P)	12185-10-3		0.045	mg	302	145
Lead-frame				Supplier	Alloy	Nickel (Ni)	7440-02-0		0.116	mg	779	374
Soft solder	Solder	1.474	mg	supplier	solder	Tin(Sn)	7440-31-5		0.003	mg	2035	10
Soft solder				supplier	solder	Silver(Ag)	7440-22-4		0.038	mg	25780	123
Soft solder				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	1.433	mg	972185	4623
Bonding wire	Other inorganic materials	0.965	mg	supplier	Bonding wire	Aluminium (Al)	7429-90-5		0.965	mg	1000000	3113
encapsulation	Other inorganic materials	150.157	mg	supplier	Molding compound	Silica Fused	60676-86-0		120.126	mg	800003	387503
encapsulation				supplier	Molding compound	Epoxy Resin	Proprietary		15.016	mg	100002	48439
encapsulation				supplier	Molding compound	Phenol Resin	Proprietary		9.76	mg	64999	31484
encapsulation				supplier	Molding compound	Carbon Black	14808-60-7		5.255	mg	34997	16952
connections coating	Solder	5.26	mg	supplier	solder alloy	Tin(Sn)	7440-31-5		5.26	mg	1000000	16968