



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 *	2015-12-03
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Rossana Bonaccorso	Representative Title	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/web/en/support/support.html		

Uncertainty Statement

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Legal Statement			
Supplier Acceptance *	true	Legal Declaration *	Standard
Legal Statement	<p>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.</p>		

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STP4N52K3	TLDZ*TZ5AB61	A	BOUSKOURA B/E	2015-12-03
Amount		UoM	Unit type	ST ECOPACK Grade
1900.00		mg	Each	ECOPACK2

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	
NAC	Tin (Sn), matte	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
SIP	10, 9.1, 4.5	3	THROUGH HOLE	
Comment	TO 220 AB NON ISOL			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
1 - Product(s) meets EU RoHS requirement without any exemptions	false
2 - 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
3 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	true
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	false
5 - Product(s) is obsolete, no information is available	false
6 - 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-15th June 2015				
Query				Response
1 - Product(s) 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	TLD2*TZ5AB61					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	Other inorganic materials	3.396	mg	supplier	die	Silicon (Si)	7440-21-3		3.277	mg	964959	1725
				supplier	metallization	Aluminium (Al)	7429-90-5		0.043	mg	12662	23
				supplier	Passivation	Silicon Nitride	12033-89-5		0.014	mg	4122	7
				supplier	Passivation	Silicon Oxide	7631-86-9		0.033	mg	9717	17
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.002	mg	589	1
				supplier	back side metallization	Gold (Au)	7440-57-5		0.005	mg	1472	3
Leadframe	Copper & its alloys	1259.453	mg	supplier	back side metallization	Nickel (Ni)	7440-02-0		0.022	mg	6478	12
				supplier	alloy	Copper (Cu)	7440-50-8		1251.376	mg	993587	658619
				supplier	alloy	Iron (Fe)	7439-89-6		1.253	mg	995	659
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.376	mg	299	198
				supplier	metallization	Nickel (Ni)	7440-02-0		6.408	mg	5088	3373
				supplier	metallization	Phosphorus (P)	12185-10-3		0.040	mg	32	21
Soft solder	Solder	3.294	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	3.146	mg	955070	1656
				supplier	solder	Silver (Ag)	7440-22-4		0.082	mg	24894	43
				supplier	solder	Tin (Sn)	7440-31-5		0.066	mg	20036	35
Bonding wires	Other inorganic materials	0.435	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.434	mg	998390	228
				supplier	wire	Magnesium (Mg)	7439-95-4		0.001	mg	1610	0
				supplier	wire							
Encapsulation	Other Organic Materials	627.060	mg	supplier	mold compound	Silica, vitreous	60676-86-0		545.542	mg	870000	287127
				supplier	mold compound	Epoxy resin	25068-38-6		62.706	mg	100000	33003
				supplier	mold compound	Phenol resin	29690-82-2		15.677	mg	25001	8251
				supplier	mold compound	Carbon Black	1333-86-4		3.135	mg	5000	1650
Connections coating	Solder	6.362	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3348