




## Materials Declaration Form

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

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2013-02-11
<b>Contact Name *</b>	Refer to "Supplier Comment" section	<b>Contact Title</b>	Refer to "Supplier Comment" section
<b>Contact Phone *</b>	Refer to "Supplier Comment" section	<b>Contact Email *</b>	Refer to "Supplier Comment" section
<b>Authorized Representative *</b>	Antonella Lanzafame	<b>Representative Title</b>	AMS/IPD Materials Declaration Champion)
<b>Representative Phone *</b>	Refer to "Supplier Comment" section	<b>Representative Email *</b>	Refer to "Supplier Comment" section
<b>Supplier Comment</b>	Online Technical Support - STMicroelectronics : <a href="http://www.st.com/internet/com/support/online_tech_support.jsp">http://www.st.com/internet/com/support/online_tech_support.jsp</a>		

Uncertainty Statement	
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Legal Statement	
<b>Supplier Acceptance *</b>	true
	<b>Legal Declaration *</b> <b>Standard</b>
<b>Legal Statement</b>	<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
STP16NF06	TLDZ*AD6AB31	A	BO2A	2013-02-11
Amount	UoM	Unit type	ST ECOPACK Grade	
1919.00	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
NAC	NAC	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	
SIP	10.20,15.50,4.5	3	Through-hole	
Comment	TO 220 AB NON ISOL			

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-19 Dec 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	TLD2*AD6AB31					
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	1.547	mg	supplier	die	Silicon (Si)	7440-21-3		1.506	mg	973497	785
die (s)				supplier	metallization	Aluminium (Al)	7429-90-5		0.028	mg	18100	15
die (s)				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.001	mg	646	1
die (s)				supplier	back side metallization	Gold (Au)	7440-57-5		0.002	mg	1293	1
die (s)				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.01	mg	6464	5
Leadframe	Copper & its alloys	646.171	mg	supplier	alloy	Copper (Cu)	7440-50-8		642.514	mg	994341	334817
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		0.296	mg	458	154
Leadframe				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.54	mg	836	281
Leadframe				supplier	metallization	Nickel (Ni)	7440-02-0		2.804	mg	4339	1461
Leadframe				supplier	metallization	Phosphorus (P)	12185-10-3		0.017	mg	26	9
Soft solder	Solder	1.593	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	1.521	mg	954802	793
Soft solder				supplier	solder	Silver (Ag)	7440-22-4		0.04	mg	25110	21
Soft solder				supplier	solder	Tin (Sn)	7440-31-5		0.032	mg	20088	17
Bonding wire	Other inorganic materials	0.753	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.752	mg	998672	392
Bonding wire				supplier	wire	Magnesium (Mg)	7439-95-4		0.001	mg	1328	1
encapsulation	Other Organic Materials	1262.574	mg	supplier	mold compound	Silica, vitreous	60676-86-0		1098.44	mg	870000	572402
encapsulation				supplier	mold compound	Epoxy resin	Proprietary		126.257	mg	100000	65793
encapsulation				supplier	mold compound	Phenol resin	Proprietary		31.564	mg	25000	16448
encapsulation				supplier	mold compound	Carbon Black	1333-86-4		6.313	mg	5000	3290
connections coating	Solder	6.362	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3315