



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 *	2016-04-22
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Rossana Bonaccorso	Representative Title	ADG 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

While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.

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
STP45N10F7	T2DZ*OD0CJ52	A	SHENZHEN B/E	2016-04-22
	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		 life.augmented
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-17th December 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	T2D2*OD0CJ52					
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	2.188	mg	supplier	die	Silicon (Si)	7440-21-3		2.097	mg	958410	1104
				supplier	metallization	Aluminium (Al)	7429-90-5		0.027	mg	12340	14
				supplier	metallization	Titanium (Ti)	7440-32-6		0.005	mg	2285	3
				supplier	Passivation	Silicon Oxide	7631-86-9		0.031	mg	14168	16
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.001	mg	457	1
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.020	mg	9141	11
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.007	mg	3199	4
Leadframe	Copper & its alloys	1259.453	mg	supplier	alloy	Copper (Cu)	7440-50-8		1251.376	mg	993587	658619
				supplier	alloy	Iron (Fe)	7439-89-6		1.253	mg	994	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	2.882	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	2.752	mg	954892	1448
				supplier	solder	Silver (Ag)	7440-22-4		0.072	mg	24983	38
				supplier	solder	Tin (Sn)	7440-31-5		0.058	mg	20125	31
Bonding wires	Other inorganic materials	2.794	mg	supplier	wire	Aluminium (Al)	7429-90-5		2.793	mg	999749	1470
				supplier	wire	Magnesium (Mg)	7439-95-4		0.001	mg	251	0
				supplier	mol							
Encapsulation	Other Organic Materials	626.321	mg	supplier	mold compound	Silica, vitreous	60676-86-0		544.899	mg	870000	286789
				supplier	mold compound	Epoxy resin	25068-38-6		62.632	mg	100000	32964
				supplier	mold compound	Phenol resin	29690-82-2		15.658	mg	25000	8241
				supplier	mold compound	Carbon Black	1333-86-4		3.132	mg	5000	1648
Connections coating	Solder	6.362	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3348