



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 *	2015-09-03
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
STFU15NM65N	TS4L*M2F4B62	A	SHENZHEN B/E	2015-09-03
	Amount	UoM	Unit type	ST ECOPACK Grade
	1640.00	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	102, 16.5, 4.5	3	THROUGH HOLE	
Comment	Package: TO220 FP ULTRA NARROW LEAD			

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	TS4L*M2F4B62					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die or Dies (choose)	Other inorganic materials	19.041	mg	supplier	die	Silicon (Si)	7440-21-3		18.372	mg	964865	11202
				supplier	metallization	Aluminium (Al)	7429-90-5		0.364	mg	19117	222
				supplier	Passivation	Silicon Nitride	12033-89-5		0.086	mg	4517	52
				supplier	Passivation	Silicon Oxide	7631-86-9		0.130	mg	6827	79
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.004	mg	210	2
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.063	mg	3309	38
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.022	mg	1155	13
Leadframe	Copper & its alloys	586.288	mg	supplier	alloy	Copper (Cu)	7440-50-8		582.709	mg	993895	355310
				supplier	alloy	Iron (Fe)	7439-89-6		0.268	mg	457	163
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.490	mg	836	299
				supplier	metallization	Nickel (Ni)	7440-02-0		2.804	mg	4783	1710
				supplier	metallization	Phosphorus (P)	12185-10-3		0.017	mg	29	10
Soft solder	Solder	8.693	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	8.302	mg	955021	5062
				supplier	solder	Silver (Ag)	7440-22-4		0.217	mg	24963	132
				supplier	solder	Tin (Sn)	7440-31-5		0.174	mg	20016	106
Bonding wires	Other inorganic materials	0.783	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.782	mg	998723	477
				supplier	wire	Magnesium (Mg)	7439-95-4		0.001	mg	1277	1
				supplier	wire							
Encapsulation	Other Organic Materials	1020.143	mg	supplier	mold compound	Quartz	14808-60-7		714.100	mg	700000	435427
				supplier	mold compound	Silica, vitreous	60676-86-0		76.511	mg	75000	46653
				supplier	mold compound	Epoxy resin	25068-38-6		142.820	mg	140000	87085
				supplier	mold compound	phenol resin	29690-82-2		71.410	mg	70000	43543
				supplier	mold compound	metal hydroxide	21645-51-2		10.201	mg	10000	6220
Connections coating	Solder	5.052	mg	supplier	mold compound	carbon black	1333-86-4		5.101	mg	5000	3110
				supplier	solder alloy	Tin (Sn)	7440-31-5		5.052	mg	1000000	3080