



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 *	2016-03-08
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		

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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
TS1220-6FP	7GUI*TS4S2RS	A	SHENZHEN B/E	2016-03-08
	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	10.2-16.15-4.5	3	THROUGH HOLE	
Comment	TO 220 ISOL FULL PACK 0.5 AB			

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)
7c-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound

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	7GUI*TS452RS					
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	3.677	mg	supplier	die	Silicon (Si)	7440-21-3		2.865	mg	779228	1508
				supplier	metallization	Aluminium (Al)	7429-90-5		0.100	mg	27189	53
				supplier	metallization	Nickel (Ni)	7440-02-0		0.017	mg	4622	9
				supplier	metallization	Gold (Au)	7440-57-5		0.011	mg	2991	6
				supplier	Passivation	Silicon Oxide	7631-86-9		0.026	mg	7069	14
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.016	mg	4350	8
				supplier	back side metallization	Gold (Au)	7440-57-5		0.006	mg	1631	3
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.026	mg	7069	14
				supplier	glass coating	Glass : Aluminium Oxide	1344-28-1		0.026	mg	7069	14
				JIG - R	glass coating	Lead-Borate Glass	65997-18-4	7c-1-Electrical and e	0.584	mg	158782	307
Leadframe	Copper & its alloys	614.126	mg	supplier	alloy	Copper (Cu)	7440-50-8		604.469	mg	984275	318142
				supplier	alloy	Iron (Fe)	7439-89-6		0.278	mg	453	146
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.508	mg	827	267
				supplier	metallization	Nickel (Ni)	7440-02-0		8.816	mg	14355	4640
				supplier	metallization	Phosphorus (P)	12185-10-3		0.055	mg	90	29
Soft solder	Solder	3.699	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	3.533	mg	955123	1859
				supplier	solder	Silver (Ag)	7440-22-4		0.092	mg	24872	48
				supplier	solder	Tin (Sn)	7440-31-5		0.074	mg	20005	39
Bonding wires	Other inorganic materials	0.376	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.376	mg	1000000	198
Encapsulation	Other Organic Materials	1272.256	mg	supplier	mold compound	Quartz	14808-60-7		890.579	mg	700000	468726
				supplier	mold compound	Silica, vitreous	60676-86-0		95.419	mg	75000	50221
				supplier	mold compound	Epoxy resin	25068-38-6		178.116	mg	140000	93745
				supplier	mold compound	phenol resin	29690-82-2		89.058	mg	70000	46873
				supplier	mold compound	metal hydroxide	21645-51-2		12.723	mg	10000	6696
				supplier	mold compound	carbon black	1333-86-4		6.361	mg	5000	3348
Connections coating	Solder	5.866	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		5.866	mg	1000000	3087