



## 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
<i>* : Required Field</i>			


Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2016-12-06
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Authorized Representative *</b>	Rossana Bonaccorso	<b>Representative Title</b>	ADG MD 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/web/en/support/support.html">http://www.st.com/web/en/support/support.html</a>		

**Uncertainty Statement**

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Legal Statement			
<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>	Standard
<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
STFH40N60M2	TS8U*MQ6LB8F	A	Z8GA	2016-12-06
	Amount	UoM	Unit type	ST ECOPACK Grade
	1900.00	mg	Each	ECOPACK® 2

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
Not Applicable	Not Applicable	Not Applicable		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10.2X9.2X4.5	3	Through-hole	
Comment	Package: TO-220FP WIDE CREEPPAGE			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 2015	
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-20th June 2016				
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	TSBU*MQ6L8BF					
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	17.028	mg	supplier	die	Silicon (Si)	7440-21-3		16.097	mg	945325	8472
				supplier	metallization	Aluminium (Al)	7429-90-5		0.448	mg	26310	236
				supplier	Passivation	Silicon Nitride	12033-89-5		0.106	mg	6225	56
				supplier	Passivation	Silicon Oxide	7631-86-9		0.158	mg	9279	83
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.011	mg	646	6
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.154	mg	9044	81
Leadframe	Copper & its alloys	779.152	mg	supplier	back side metallization	Silver (Ag)	7440-22-4		0.054	mg	3171	28
				supplier	alloy	Copper (Cu)	7440-50-8		774.345	mg	993830	407550
				supplier	alloy	Iron (Fe)	7439-89-6		0.779	mg	1000	410
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.234	mg	300	123
				supplier	metallization	Nickel (Ni)	7440-02-0		3.770	mg	4839	1984
				supplier	metallization	Phosphorus (P)	12185-10-3		0.024	mg	31	13
Soft solder	Solder	4.987	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	4.764	mg	955284	2507
				supplier	solder	Silver (Ag)	7440-22-4		0.124	mg	24865	65
				supplier	solder	Tin (Sn)	7440-31-5		0.099	mg	19851	52
Bonding wire	Other inorganic materials	1.041	mg	supplier	wire	Aluminium (Al)	7429-90-5		1.041	mg	1000000	548
Encapsulation	Other inorganic materials	1091.661	mg	supplier	mold compound	Silica, vitreous	60676-86-0		81.875	mg	75000	43092
				supplier	mold compound	Quartz	14808-60-7		764.162	mg	699999	402191
				supplier	mold compound	Epoxy resin	25068-38-6		152.832	mg	140000	80438
				supplier	mold compound	phenol resin	29690-82-2		76.417	mg	70001	40219
				supplier	mold compound	carbon black	1333-86-4		5.458	mg	5000	2873
				supplier	mold compound	metal hydroxide	21465-51-2		10.917	mg	10000	5746
Connections coating	Solder	6.131	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.131	mg	1000000	3227