



## 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>	<b>STMicroelectronics</b>	<b>Response Date *</b>	2017-01-12
<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		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

**Legal Statement**

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.

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
TS420-600B-TR	BGDP*PTG046Q	A	998G	2017-01-12
	Amount	UoM	Unit type	ST ECOPACK Grade
	320.00	mg	Each	ECOPACK2

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	6.5-6.1-2.3	3	GULL WING	
Comment	TO 252 DPAK			

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
Exemption Id.	Description
7a	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)
7c-1	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-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 : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	BGDP*PTG046Q									
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	2.508	mg	supplier	die	Silicon (Si)	7440-21-3		1.977	mg	788278	6178				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.069	mg	27512	216				
				supplier	metallization	Gold (Au)	7440-57-5		0.008	mg	3190	25				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.018	mg	7176	56				
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.011	mg	4386	35				
				supplier	back side metallization	Gold (Au)	7440-57-5		0.004	mg	1595	13				
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.018	mg	7177	56				
Leadframe	Copper & its alloys	166.051	mg	JIG - R	glass coating	Lead-Borate Glass	65997-18-4	7c-I-Electrical and e	0.403	mg	160686	1259				
				supplier	alloy	Copper (Cu)	7440-50-8		164.152	mg	988564	512975				
				supplier	alloy	CopperPhosphorous (CuP)	12517-41-8		0.330	mg	1987	1031				
				supplier	alloy	Cobalt (Co)	7440-48-4		0.462	mg	2782	1444				
				supplier	metallization	Nickel (Ni)	7440-02-0		1.107	mg	6667	3459				
Soft solder	Solder	2.569	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	2.454	mg	955236	7669				
				supplier	solder	Silver (Ag)	7440-22-4		0.064	mg	24912	200				
				supplier	solder	Tin (Sn)	7440-31-5		0.051	mg	19852	159				
Bonding wires	Other inorganic materials	0.923	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.923	mg	1000000	2884				
				Encapsulation	Other Organic Materials	146.904	mg	supplier	mold compound	Silica, vitreous	60676-86-0		131.847	mg	897504	412022
								supplier	mold compound	Epoxy resin	25068-38-6		10.283	mg	69998	32134
								supplier	mold compound	Phenol resin	29690-82-2		4.407	mg	29999	13772
supplier	mold compound	carbon black	1333-86-4		0.367	mg	2499	1147								
Connections coating	Solder	1.045	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		1.045	mg	1000000	3266				