



## 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>	STMicroelectronics	<b>Response Date *</b>	2016-08-31
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Authorized Representative *</b>	Giovanni Giacopello	<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> <b>Standard</b>
<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
STD45N10F7	TLDP*ODOCR52	A	SHENZHEN B/E	2016-08-31
	Amount	UoM	Unit type	ST ECOPACK Grade
	330.00	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	
NAC	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	
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	TLPD*ODOCR52					
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	2.189	mg	supplier	die	Silicon (Si)	7440-21-3		2.097	mg	957972	6355
				supplier	metallization	Aluminium (Al)	7429-90-5		0.027	mg	12334	82
				supplier	metallization	Titanium (Ti)	7440-32-6		0.005	mg	2284	15
				supplier	Passivation	Silicon Oxide	7631-86-9		0.031	mg	14162	94
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.002	mg	914	6
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.021	mg	9593	64
				supplier	back side metallization	Vanadium (V)	7440-62-2		0.001	mg	457	3
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.005	mg	2284	15
				Leadframe	Copper & its alloys	166.150	mg	supplier	alloy	Copper (Cu)	7440-50-8	
supplier	alloy	CopperPhosphorus (CuP)	12517-41-8						0.330	mg	1986	1000
supplier	alloy	Cobalt (Co)	7440-48-4						0.462	mg	2781	1400
supplier	metallization	Nickel (Ni)	7440-02-0						1.199	mg	7216	3633
supplier	metallization	Phosphorus (P)	12185-10-3						0.007	mg	42	21
supplier	solder	Lead (Pb)	7439-92-1					7a-Lead in high me	2.752	mg	954892	8339
Soft solder	Solder	2.882	mg	supplier	solder	Silver (Ag)	7440-22-4		0.072	mg	24983	218
				supplier	solder	Tin (Sn)	7440-31-5		0.058	mg	20125	176
				supplier	wire	Aluminium (Al)	7429-90-5		0.827	mg	994947	2506
	Other inorganic materials			supplier	wire	Magnesium (Mg)	7439-95-4		0.004	mg	5053	13
				supplier	wire							
Encapsulation	Other Organic Materials	156.903	mg	supplier	mold compound	Silica, vitreous	60676-86-0		137.290	mg	874999	416030
				#N/A	mold compound	Tetramethyl-biphenyl-diyl-bis oxymethylene-b	EC 413-900-7		6.276	mg	39999	19018
				supplier	mold compound	Epoxy Resin	25068-38-6		4.707	mg	29999	14264
				supplier	mold compound	phenol resin	29690-82-2		7.845	mg	49999	23773
				supplier	mold compound	Carbon black	1333-86-4		0.785	mg	5004	2379
Connections coating	Solder	1.045	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		1.045	mg	1000000	3167