



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 *	2017-10-10
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Rossana Bonaccorso	Representative Title	ADG 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

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
STPS41L60CT	HTDZ*Z48Q02U	A	3068	2017-10-10
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		
NA	NA	NA		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
SIP	10-9.1-4.5	3	THROUGH HOLE	
Comment	TO 220 AB NON ISOL			

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)

Query : California Prop65 list, dated 27th January 2017			
Query			Response
1 - The product does not contain identified substance from California Prop 65 List, no exposure to consumers is foreseen			FALSE
2 - The product is containing below substance(s) from California Prop 65 List, no exposure to consumers is foreseen			TRUE
Substance	amount in product (mg)	Application	ppm in product
Nickel	0.60	die backside metal - leadframe metal	318
Lead	14.73	soft solder	7751

QueryList : REACH-12th January 2017				
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	HTD2*Z48Q02U					
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	17.676	mg	supplier	die	Silicon (Si)	7440-21-3		16.697	mg	944614	8788
				supplier	metallization	Aluminium (Al)	7429-90-5		0.691	mg	39093	364
				supplier	metallization	Titanium (Ti)	7440-32-6		0.015	mg	848	8
				supplier	metallization	Tungsten (W)	7440-33-7		0.025	mg	1414	13
				supplier	Passivation	Silicon Oxide	7631-86-9		0.102	mg	5771	54
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.008	mg	453	4
				supplier	back side metallization	Gold (Au)	7440-57-5		0.024	mg	1358	13
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.114	mg	6449	60
Leadframe	Copper & its alloys	1253.534	mg	supplier	alloy	Copper (Cu)	7440-50-8		1251.375	mg	998278	658618
				supplier	alloy	Iron (Fe)	7439-89-6		1.253	mg	1000	659
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.376	mg	300	198
				supplier	metallization	Nickel (Ni)	7440-02-0		0.490	mg	390	258
				supplier	metallization	Phosphorus (P)	12185-10-3		0.040	mg	32	21
Soft solder	Solder	15.420	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	14.726	mg	954994	7751
				supplier	solder	Silver (Ag)	7440-22-4		0.386	mg	25032	203
				supplier	solder	Tin (Sn)	7440-31-5		0.308	mg	19974	162
Bonding wires	Other inorganic materials	4.706	mg	supplier	wire	Aluminium (Al)	7429-90-5		4.706	mg	1000000	2477
Encapsulation	Other Organic Materials	602.302	mg	supplier	mold compound	Silica, vitreous	60676-86-0		524.002	mg	869999	275791
				supplier	mold compound	Epoxy resin	25068-38-6		60.230	mg	100000	31700
				supplier	mold compound	Phenol resin	29690-82-2		15.058	mg	25001	7925
				supplier	mold compound	Carbon Black	1333-86-4		3.012	mg	5000	1585
Connections coating	Solder	6.362	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3348