



Materials Declaration Form


IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D

** : Required Field*

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2017-04-12
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Giuseppe Vitali Palma	Representative Title	ADG MD Champion
Representative Phone *	Refer to Supplier Comment section		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	<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
TYN1212RG	7AVP*12CHNL1	A	3068	2017-04-12
	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
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	10.2-15.5-4.5	3	Through-hole	
Comment	TO 220 NI CLIP			

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-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

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	0.19	die backside metal	98
Lead	6.63	soft solder	3489
Lead-Borate Glass	0.60	glass coating	316

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	7AVP*12CHNL1					
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	10.049	mg	supplier	die	Silicon (Si)	7440-21-3		9.134	mg	908946	4807
				supplier	metallization	Gold (Au)	7440-57-5		0.026	mg	2587	14
				supplier	Passivation	Silicon Oxide	7631-86-9		0.039	mg	3881	21
				supplier	back side metallization	Gold (Au)	7440-57-5		0.009	mg	897	5
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.186	mg	18509	98
				supplier	glass coating	Glass : Aluminium Oxide (Al2O3)	1344-28-1		0.055	mg	5473	29
Leadframe	Copper & its alloys	1253.003	mg	JIG - R	glass coating	Lead-Borate Glass	65997-18-4	7c -i-Electrical and e	0.600	mg	59707	316
				supplier	alloy	Copper (Cu)	7440-50-8		1251.750	mg	999000	658816
Soft solder	Solder	7.203	mg	supplier	alloy	CopperPosphorous (CuP)	12517-41-8		1.253	mg	1000	659
				JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	6.629	mg	920311	3489
				supplier	solder	Silver (Ag)	7440-22-4		0.179	mg	24851	94
				supplier	solder	Tin (Sn)	7440-31-5		0.359	mg	49840	189
				supplier	solder	flux residue	Proprietary		0.036	mg	4998	18
Encapsulation	Other Organic Materials	591.758	mg	supplier	mold compound	Silica, vitreous	60676-86-0		449.736	mg	760000	236703
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		60.359	mg	101999	31768
				supplier	mold compound	Phenol resin	9003-35-4		35.506	mg	60001	18687
				supplier	mold compound	Others	Proprietary		29.588	mg	50000	15573
				supplier	mold compound	Metal hydroxide	21645-51-2		11.835	mg	20000	6229
				supplier	mold compound	Carbon black	1333-86-4		4.734	mg	8000	2492
Connections coating	Solder	6.362	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3348
Clip	Copper & its alloys	31.625	mg	supplier	alloy	Copper (Cu)	7440-50-8		31.625	mg	1000000	16645