



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 *	2019-04-12
Company Unique ID	NL 008751171801		
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Contact Email *	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


While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.

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
TN3015H-6I	7AVT*306HMM1	A	SH1A	2019-04-12
	Amount	UoM	Unit type	ST ECOPACK Grade
	1900	mg	Each	ECOPACK® 2
Comment	ECOPACK® 2 is STMicroelectronics trade name for ROHS compliant device without Brominated and Chlorinated compound (900ppm) and without Antimony oxide flame retardant (in each organic material)			

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	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10 - 15.5 - 4.5	3	Through-hole	
Comment	TO 220 I CLIP			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-March 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-l	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 : ELV directive : 2000/53/EC amended 2017/2096 _November 2017	
Query	Response
1 - Product(s) meets EU ELV requirements without any exemptions	FALSE
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	TRUE
Exemption Id.	Description
8e	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)
10a	Electrical and electronic components which contain lead in a glass or ceramic, in a glass or ceramic matrix compound, in a glass-ceramic material, or in a glass-ceramic matrix compound. This exemption does not cover the use of lead in: — glass in bulbs and glaze of spark plugs, — dielectric ceramic materials of components listed under

QueryList : California Prop65 list, dated 23rd November 2018			
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	3.87	Die - Leadframe	2039
Lead	20.92	Soft solder - solder paste	11010
Lead-Borate Glass	1.59	Die	836

QueryList : REACH-15th January 2019				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Lead	1000 ppm	22.51	Die	11846
2 - Product(s) does not contain REACH Substances Of Very High Concern in any Embedded article nor Homogeneous Material above the limits per the definition within REACH				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material
Lead	1000 ppm	1.59	Die	171268
Lead	1000 ppm	20.92	Soft solder & solder paste	1770260

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	7AVT*306HMM1					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	M-011 Other inorganic materials	9.272	mg	supplier	die	Silicon (Si)	7440-21-3		7.247	mg	781601	3814
				supplier	metallization	Gold (Au)	7440-57-5		0.028	mg	3020	15
				supplier	passivation	Nickel (Ni)	7440-02-0		0.145	mg	15638	76
				supplier	Passivation	Silicon Oxide	7631-86-9		0.058	mg	6255	31
				supplier	back side metallization	Gold (Au)	7440-57-5		0.009	mg	971	5
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.197	mg	21247	104
Leadframe	M-004 Copper and its alloys	1607.729	mg	JIG-R & California 65	glass coating	Lead-Borate Glass	65997-18-4	7c-I-Electrical and e	1.588	mg	171268	836
				supplier	alloy	Copper (Cu)	7440-50-8		1602.339	mg	996647	843336
				supplier	alloy	Iron (Fe)	7439-89-6		0.738	mg	459	388
Soft solder	Solder	7.440	mg	supplier	alloy	Iron Phosphide (FeP)	26508-33-8		1.348	mg	839	709
				supplier	metallization	Nickel (Ni)	7440-02-0		3.304	mg	2055	1739
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	6.847	mg	920296	3604
				supplier	solder	Silver (Ag)	7440-22-4		0.185	mg	24866	97
				supplier	solder	Tin (Sn)	7440-31-5		0.371	mg	49866	195
				supplier	solder	flux residue	Proprietary		0.037	mg	4972	19
Clip	M-004 Copper and its alloys	31.625	mg	supplier	clip	Copper (Cu)	7440-50-8		31.625	mg	1000000	16645
Encapsulation	M-011 Other inorganic materials	198.306	mg	supplier	mold compound	Silica, vitreous	60676-86-0		150.713	mg	760002	79323
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		20.227	mg	101999	10646
				supplier	mold compound	Phenol resin	9003-35-4		11.898	mg	59998	6262
				supplier	mold compound	Others	Proprietary		9.915	mg	49998	5218
				supplier	mold compound	Metal hydroxide	21645-51-2		3.966	mg	19999	2087
Solder paste	Solder	16.556	mg	SVHC	mold compound	Carbon black	1333-86-4		1.587	mg	8004	836
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	14.072	mg	849964	7406
				supplier	solder	Antimony (Sb)	7440-36-0		1.656	mg	100024	872
Connections coating	Solder	6.314	mg	supplier	solder	Tin (Sn)	7440-31-5		0.828	mg	50012	436
				supplier	solder alloy	Tin (Sn)	7440-31-5		6.314	mg	1000000	3323
Ceramic	M-010 Ceramics / glass	22.758	mg	supplier	ceramic	Alumina	1344-28-1		22.530	mg	989982	11858
				supplier	metallization	Nickel (Ni)	7440-02-0		0.228	mg	10018	120