



## 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  <i>* : Required Field</i>

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2016-06-24
<b>Contact Name *</b>	Refer to "Supplier Comment" section	<b>Contact Title</b>	Refer to "Supplier Comment" section
<b>Contact Phone *</b>	Refer to "Supplier Comment" section	<b>Contact Email *</b>	Refer to "Supplier Comment" section
<b>Authorized Representative *</b>	Giovanni Giacobello	<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>	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
TN4015H-6I	7AVT*406HMM1	A	SH1A	2016-06-24
Amount	UoM	Unit type	ST ECOPACK Grade	
1900.00	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
NAC	NAC	NAC		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable ; if coating is used c	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10,15,5,4,5	3	Through-hole	
Comment	Package: TO 220 I CLIP			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	false
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
Product(s) meets EU RoHS requirements by application of the selected exemption(s)	true
Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Product(s) is obsolete, no information is available	false
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)
7c-1	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devi

QueryList : REACH-20th June 2016				
Query				Response
The product 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	7AVT*406HMM1					
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	13.172	mg	supplier	die	Silicon (Si)	7440-21-3		11.607	mg	881187	6109
die				supplier	metallization	Aluminium (Al)	7429-90-5		0.107	mg	8123	56
die				supplier	metallization	Nickel (Ni)	7440-02-0		0.149	mg	11312	78
die				supplier	metallization	Gold (Au)	7440-57-5		0.032	mg	2429	17
die				supplier	passivation	Alumina	1344-28-1		0.094	mg	7136	49
die				supplier	passivation	Lead silicate Glass	65997-18-4	7c-I-Electrical and	0.85	mg	64531	447
die				supplier	back side metallization	Gold (Au)	7440-57-5		0.015	mg	1139	8
die				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.318	mg	24142	167
Leadframe	Copper & its alloys	1593.594	mg	supplier	alloy	Copper (Cu)	7440-50-8		1588.222	mg	996629	835906
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		0.732	mg	459	385
Leadframe				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		1.336	mg	838	703
Leadframe				supplier	metallization	Nickel (Ni)	7440-02-0		3.304	mg	2073	1739
Soft solder	Solder	8.744	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	8.088	mg	924977	4257
Soft solder				supplier	solder	Silver (Ag)	7440-22-4		0.437	mg	49977	230
Soft solder				supplier	solder	Tin (Sn)	7440-31-5		0.219	mg	25046	115
Bonding wire	Other inorganic materials	31.625	mg	supplier	Slug + Trigger	Copper (Cu)	7440-50-8		31.625	mg	1000000	16645
encapsulation		157.275	mg	supplier	mold compound	Silica, vitreous	60676-86-0		119.529	mg	760000	62910
encapsulation				supplier	mold compound	Phenol resin	9003-35-4		9.436	mg	59997	4966
encapsulation				supplier	mold compound	Carbon black	1333-86-4		1.259	mg	8005	663
encapsulation				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		16.042	mg	102000	8443
encapsulation				supplier	mold compound	Metal hydroxide	3.145		3.145	mg	19997	1655
encapsulation				supplier	mold compound	Others	Proprietary		7.864	mg	50002	4139
solder paste	Solder	0.076	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	0.064	mg	842105	34
solder paste				supplier	solder	Antimony (Sb)	7440-36-0		0.008	mg	105263	4
solder paste				supplier	solder	Tin (Sn)	7440-31-5		0.004	mg	52632	2
connections coating	Other inorganic materials	6.314	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.314	mg	1000000	3323
subelement		89.2	mg	supplier	Ceramic isolator	Nickel (Ni)	7440-02-0		1.07	mg	11996	563
subelement	Ceramics / Glass			supplier	Ceramic isolator	Phosphorus (P)	7723-14-0		0.08	mg	897	42
subelement				supplier	Ceramic isolator	Manganese (Mn)	7439-96-5		3.479	mg	39002	1831
subelement				supplier	Ceramic isolator	Titanium (Ti)	7440-32-6		0.366	mg	4103	193
subelement				supplier	Ceramic isolator	Molybdenum oxide	1313-27-5		4.46	mg	50000	2347
subelement				supplier	Ceramic isolator	Alumina (Al2O3)	1344-28-1		79.745	mg	894002	41971