



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 *	2015-02-13
Contact Name *	Refer to "Supplier Comment" section	Contact Title	Refer to "Supplier Comment" section
Contact Phone *	Refer to "Supplier Comment" section	Contact Email *	Refer to "Supplier Comment" section
Authorized Representative *	Giovanni Giacopello	Representative Title	AMS & IPD Materials Declaration 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/internet/com/support/online_tech_support.jsp		

Uncertainty Statement

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Legal Statement

Supplier Acceptance *	true	Legal Declaration *	Standard
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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
	7AVP*166FMM1	A	SH1A	2015-02-13
Amount	UoM	Unit type	ST ECOPACK Grade	
1900.00	mg	Each	ECOPACK® 1	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles	 life.augmented	
NAC	NAC	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy		
Not Applicable ; if coating is used o	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10.2,15.5,4.5	3	Through-hole	
Comment	Package: TO 220 NI CLIP; MDF for TN1610H-6T			

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-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices

QueryList : REACH-17th December 2014				
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	7AVP*166FMM1					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
die (s)	Other inorganic materials	4.431	mg	supplier	die	Silicon (Si)	7440-21-3		3.942	mg	889641	2075
die (s)				supplier	metallization	Nickel (Ni)	7440-02-0		0.05	mg	11284	26
die (s)				supplier	metallization	Gold (Au)	7440-57-5		0.011	mg	2483	6
die (s)				supplier	passivation	Alumina	1344-28-1		0.032	mg	7222	17
die (s)				supplier	passivation	Lead silicate Glass	65997-18-4	7c-I-Electrical and e	0.284	mg	64094	149
die (s)				supplier	back side metallization	Gold (Au)	7440-57-5		0.005	mg	1128	3
die (s)				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.107	mg	24148	56
Leadframe	Copper & its alloys	1630.302	mg	supplier	alloy	Copper (Cu)	7440-50-8		1628.672	mg	999000	857196
Leadframe				supplier	alloy	CopperPhosphorous (CuP)	12517-41-8		1.63	mg	1000	858
Soft solder	Solder	2.318	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	2.167	mg	934858	1141
Soft solder				supplier	solder	Silver (Ag)	7440-22-4		0.035	mg	15099	18
Soft solder				supplier	solder	Tin (Sn)	7440-31-5		0.116	mg	50043	61
Clip	Other inorganic materials	31.625	mg	supplier	clip	Copper (Cu)	7440-50-8		35.509	mg	1000000	18689
encapsulation	Other Organic Materials	221.126	mg	supplier	mold compound	Silica, vitreous	60676-86-0		180.303	mg	815386	94896
encapsulation				supplier	mold compound	Phenol resin	9003-35-4		12.15	mg	54946	6395
encapsulation				supplier	mold compound	Carbon black	1333-86-4		1.944	mg	8791	1023
encapsulation				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		26.729	mg	120877	14068
connections coating	Solder	6.314	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.314	mg	1000000	3323