



## 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>	2014-10-29
<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>	Emilio Castelli	<b>Representative Title</b>	APG 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
L9959T-TR-D	ARVC*MV19DC1	A	MU1A	2014-10-29
Amount	UoM	Unit type	ST ECOPACK Grade	
488.00	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
3	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
CHP	7.5x10.3	36	gull wing	
Comment				

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 '7a' exemption (other selected exemptions may apply)	<b>TRUE</b>
Product(s) meets EU RoHS requirements by application of the selected exemption(s)	false
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

QueryList : REACH-16th June 2014				
Query				Response
The product does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				<b>true</b>
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product

Material Composition Declaration						Mfr Item Name	ARVC*MV19DC1					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die or Dies	Other inorganic materials	12.237	mg	supplier	die	Silicon (Si)	7440-21-3		11.357	mg	928087	23273
Die or Dies				supplier	metallization	Aluminium (Al)	7429-90-5		0.120	mg	9806	246
Die or Dies				supplier	metallization	Tungsten (W)	7440-33-7		0.096	mg	7845	197
Die or Dies				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.024	mg	1961	49
Die or Dies				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.204	mg	16671	418
Die or Dies				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.009	mg	735	18
Die or Dies				supplier	back side metallization	Gold (Au)	7440-57-5		0.024	mg	1961	49
Die or Dies				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.068	mg	5557	139
Die or Dies				supplier	back side metallization	Vanadium (V)	7440-62-2		0.005	mg	409	10
Die or Dies				supplier	glass coating	Glass: Silicon Dioxide (SiO2)	7631-86-9		0.204	mg	16671	418
Die or Dies				supplier	polymer die coating	PIXI Gamma-butyrolactone	96-48-0		0.126	mg	10297	258
Leadframe	Copper & its alloys	225.847	mg	supplier	alloy	Copper (Cu)	7440-50-8		218.066	mg	965547	446857
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		5.129	mg	22710	10510
Leadframe				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.309	mg	1368	633
Leadframe				supplier	alloy	Zinc (Zn)	7440-66-6		0.269	mg	1191	551
Leadframe				supplier	metallization	Silver (Ag)	7440-22-4		2.074	mg	9183	4250
Die attach		4.621	mg	JIG - R	glue or tape	Lead (Pb)	7439-92-1	7a-Lead in high mel	4.506	mg	975114	9234
Die attach				supplier	glue or tape	Silver (Ag)	7440-22-4		0.069	mg	14932	141
Die attach				supplier	glue or tape	Tin (Sn)	7440-31-5		0.046	mg	9955	94
Bonding wire		2.262		supplier	wire	Gold (Au)	7440-57-5		0.749	mg	331123	1535
Bonding wire				supplier	wire	Copper (Cu)	7440-50-8		1.510	mg	667551	3094
Bonding wire				supplier	wire	Palladium (Pd)	7440-05-3		0.002	mg	884	4
Bonding wire				supplier	wire	Platinum (Pt)	7440-06-4		0.001	mg	442	2
encapsulation		237.008	mg	supplier	mold compound	Phenol Resin	205830-20-2		9.480	mg	39999	19426
encapsulation				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		7.110	mg	29999	14570
encapsulation				#N/A	mold compound	epoxy resin	Proprietary		7.110	mg	29999	14570
encapsulation				supplier	mold compound	carbon black	1333-86-4		0.474	mg	2000	971
encapsulation				supplier	mold compound	Silica, vitreous	60676-86-0		212.834	mg	898003	436135
connections coating	Solder	6.027	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.027	mg	1000000	12350