



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 *	01/28/2015
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 *	Giuseppe Vitali Palma	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
	7TUI*AHFAT2A	A	SH1A	01/28/2015
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	
NAC	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10.2X9.2X4.5	4	Through-hole	
Comment	Package: TO 220 ISOL FULL PACK 0.5 AB ; MD valid for ACST310-8FP, ACST210-8FP			

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)

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				true
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product

Material Composition Declaration						Mfr Item Name	7TUI*AHFAT2A					
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	1.774	mg	supplier	die	Silicon (Si)	7440-21-3		1.675	mg	944194	882
die (s)				supplier	metallization	Aluminium (Al)	7429-90-5		0.018	mg	10147	9
die (s)				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.01	mg	5637	5
die (s)				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.012	mg	6764	6
die (s)				supplier	passivation	Gamma-butyrolactone	96-48-0		0.013	mg	7328	7
die (s)				supplier	passivation	Polyhydroxyamide	55295-98-2		0.006	mg	3382	3
die (s)				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.021	mg	11838	11
die (s)				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.001	mg	564	1
die (s)				supplier	back side metallization	Gold (Au)	7440-57-5		0.001	mg	564	1
die (s)				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.017	mg	9583	9
Leadframe	Copper & its alloys	672.904	mg	supplier	alloy	Copper (Cu)	7440-50-8		672.029	mg	998700	353699
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		0.673	mg	1000	354
Leadframe				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.202	mg	300	106
Die attach	Other Organic Materials	1.737	mg	JIG R	soft solder	Lead (Pb)	7439-92-1	7a-Lead in high me	1.659	mg	955095	873
Die attach				supplier	soft solder	Silver (Ag)	7440-22-4		0.043	mg	24755	23
Die attach				supplier	soft solder	Tin (Sn)	7440-31-5		0.035	mg	20150	18
Bonding wire	Other inorganic materials	0.471	mg	supplier	wire	Copper (Cu)	7440-50-8		0.471	mg	1000000	248
encapsulation	Other Organic Materials	1217.248	mg	supplier	mold compound	Silica, vitreous	60676-86-0		91.294	mg	75000	48049
encapsulation				supplier	mold compound	Quartz	14808-60-7		852.074	mg	700000	448460
encapsulation				supplier	mold compound	Epoxy resin	Proprietary		170.415	mg	140000	89692
encapsulation				supplier	mold compound	phenol resin	Proprietary		85.207	mg	70000	44846
encapsulation				supplier	mold compound	carbon black	1333-86-4		6.086	mg	5000	3203
encapsulation				supplier	mold compound	metal hydroxide	Proprietary		12.172	mg	10000	6406
connections coating	Solder	5.866	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		5.866	mg	1000000	3087