



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 *	02/02/2015
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
	HFLW*879K027	A	Z8GA	02/02/2015
Amount	UoM	Unit type	ST ECOPACK Grade	
4430.00	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	15.75X20.15X5015	4	Through-hole	
Comment	Package: to 247; MD valid for STTH60RL03CW, STTH6003CW, STTH60W03CW			

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	HFLW*879K027					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Silicon Die	Other Inorganic Material	20.473	mg	Supplier	Silicon die	Silicon	7440-21-3		18.64	mg	910467	4208
Silicon Die				supplier	metallization	Aluminium (Al)	7429-90-5		0.651	mg	31798	147
Silicon Die				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.218	mg	10648	49
Silicon Die				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.346	mg	16900	78
Silicon Die				supplier	passivation	Gamma-butyrolactone	96-48-0		0.142	mg	6936	32
Silicon Die				supplier	passivation	Polyhydroxyamide	55295-98-2		0.064	mg	3126	14
Silicon Die				supplier	passivation	Alcoxysilane	proprietary		0.004	mg	195	1
Silicon Die				supplier	passivation	Aryl Silicic Acid	proprietary		0.002	mg	98	0
Silicon Die				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.022	mg	1075	5
Silicon Die				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.272	mg	13286	61
Silicon Die				supplier	back side metallization	Gold (Au)	7440-57-5		0.112	mg	5471	25
Leadframe	Copper and its alloy	3918.767	mg	Supplier	Alloy	Copper(CU)	7440-50-8		3913.608	mg	998684	883433
Leadframe				Supplier	Alloy	Ferrous(Fe)	7439-89-6		3.968	mg	1013	896
Leadframe				Supplier	Alloy	Phosphorus(P)	12185-10-3		1.191	mg	304	269
Die Attach	Other Organic Material	2.286	mg	Supplier	Soft Solder	Tin(Sn)	7440-31-5		0.082	mg	35871	19
Die Attach				Supplier	Soft Solder	Silver(Ag)	7440-22-4		0.103	mg	45057	23
Die Attach				Supplier	Soft Solder	Lead	7439-92-1		2.101	mg	919073	474
Bonding wire	Other Inorganic Material	65.305	mg	Supplier	Bonding wire	Aluminum(Al)	84195-93-7		65.305	mg	1000000	14742
Encapsulation	Other Organic Material	394.181	mg	Supplier	Molding compound	Epoxy resin	29690-82-2		24.227	mg	61462	5469
Encapsulation				Supplier	Molding compound	Phenol resin	9003-35-4		8.653	mg	21952	1953
Encapsulation				Supplier	Molding compound	Silica	60676-86-0		359.57	mg	912195	81167
Encapsulation				Supplier	Molding compound	Carbon black	1333-86-4		1.731	mg	4391	391
Finishing	Other Inorganic Material	28.988	mg	Supplier	Connection Coating	Tin(Sn)	7440-31-5		28.988	mg	1000000	6544