



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 *	2014-07-21
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
	A977*U513DD6	A	MU1A	2014-07-21
Amount	UoM	Unit type	ST ECOPACK Grade	
1909.485	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles	 life.augmented	
3	245	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	3.15X15.90X11.00	25	gull wing	
Comment	Package: PowerSO 20 .43 SLUG DOWN; MD valid for L6234PD013TR, L6234PD			

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 December 2013				
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	A977*U513DD6					
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	18.27	mg	supplier	die	Silicon (Si)	7440-21-3		17.745	mg	971264	9293
die (s)				supplier	metallization	Aluminium (Al)	7429-90-5		0.102	mg	5583	53
die (s)				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.057	mg	3120	30
die (s)				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.239	mg	13082	125
die (s)				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.01	mg	547	5
die (s)				supplier	back side metallization	Gold (Au)	7440-57-5		0.027	mg	1478	14
die (s)				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.09	mg	4926	47
Leadframe	Copper & its alloys	409.92	mg	supplier	alloy	Copper (Cu)	7440-50-8		405.09	mg	988217	212146
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		0.406	mg	990	213
Leadframe				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.122	mg	298	64
Leadframe				supplier	metallization	Silver (Ag)	7440-22-4		4.302	mg	10495	2253
Soft solder	Other organic materials	6.878	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	6.706	mg	974993	3512
Soft solder				supplier	solder	Silver (Ag)	7440-22-4		0.103	mg	14975	54
Soft solder				supplier	solder	Tin (Sn)	7440-31-5		0.069	mg	10032	36
Bonding wire	Other inorganic materials	1.45	mg	supplier	wire	Copper (Cu)	7440-50-8		1.45	mg	1000000	759
encapsulation	Other organic materials	1471.311	mg	supplier	mold compound	Phenol Resin	205830-20-2		58.852	mg	40000	30821
encapsulation				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		44.14	mg	30000	23116
encapsulation				supplier	mold compound	epoxy resin	Proprietary		44.14	mg	30000	23116
encapsulation				supplier	mold compound	carbon black	1333-86-4		2.943	mg	2000	1541
encapsulation				supplier	mold compound	silica vitreous	60676-86-0		1321.236	mg	897999	691933
connections coating	Solder	1.656	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		1.656	mg	1000000	867