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## Materials Declaration Form

<b>IPC Form Type *</b>	<b>1752</b> Distribute	<b>Version</b>	<b>2</b>
<b>Sectionals *</b>	Material Info Manufacturing Info	<b>Subsectionals *</b>	A-D  * : Required Field

Supplier Information			
<b>Company Name *</b>	<b>STMicroelectronics</b>	<b>Response Date *</b>	<b>2014-02-24</b>
<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>	Antonella Lanzafame	<b>Representative Title</b>	AMS/IPD Materials Declaration 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/internet/com/support/online_tech_support.jsp">http://www.st.com/internet/com/support/online_tech_support.jsp</a>		

**Uncertainty Statement**

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**Legal Statement**

<b>Supplier Acceptance *</b>	<b>true</b>	<b>Legal Declaration *</b>	<b>Standard</b>
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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
	PZO7*1431ADM	A	SH1A	2014-02-24
Amount	UoM	Unit type	ST ECOPACK Grade	
76.29	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable ; if coating is used o	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	4.90,3.9,1.75	8	gull wing	
Comment	O7 SO 08 .15 JEDEC; MD valid for CP: TL1431ACDT,TL1431AIDT,TL1431CDT,TL1431IDT.			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	true
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)	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 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	PZ07*1431ADM					
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	1.361	mg	supplier	die	Silicon (Si)	7440-21-3		1.327	mg	975018	17394
die (s)				supplier	metallization	Aluminium (Al)	7429-90-5		0.011	mg	8082	144
die (s)				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.006	mg	4409	79
die (s)				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.007	mg	5143	92
die (s)				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.001	mg	735	13
die (s)				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.009	mg	6613	118
Leadframe	Copper & its alloys	29.072	mg	supplier	alloy	Copper (Cu)	7440-50-8		28.19	mg	969662	369511
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		0.663	mg	22805	8691
Leadframe				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.04	mg	1376	524
Leadframe				supplier	alloy	Zinc (Zn)	7440-66-6		0.035	mg	1204	459
Leadframe				supplier	metallization	Nickel (Ni)	7440-02-0		0.134	mg	4609	1756
Leadframe				supplier	metallization	Palladium (Pd)	7440-05-3		0.005	mg	172	66
Leadframe				supplier	metallization	Gold (Au)	7440-57-5		0.005	mg	172	66
Die attach	Other inorganic materials	0.245	mg	supplier	glue or tape	Silver (Ag)	7440-22-4		0.223	mg	910204	2923
Die attach				supplier	glue or tape	acrylate	Proprietary		0.012	mg	48980	157
Die attach				supplier	glue or tape	Methacrylate	Proprietary		0.01	mg	40816	131
Bonding wire	Other inorganic materials	0.02	mg	supplier	wire	Copper (Cu)	7440-50-8		0.02	mg	1000000	262
encapsulation	Other Organic Materials	45.592	mg	supplier	mold compound	Epoxy Resin	Proprietary		3.42	mg	75013	44829
encapsulation				supplier	mold compound	Phenol Resin	Proprietary		2.28	mg	50009	29886
encapsulation				supplier	mold compound	Silica, vitreous	60676-86-0		39.481	mg	865963	517512
encapsulation				supplier	mold compound	Carbon black	1333-86-4		0.228	mg	5001	2989
encapsulation				supplier	mold compound	Bismuth (Bi)	7440-69-9		0.183	mg	4014	2399