



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 *	2015-10-27
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 *	Flavio Di Francesco	Representative Title	AMS 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/web/en/support/online_tech_support.html		

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
	YYWY*0391AD6	A	ZS1A	2015-10-27
Amount	UoM	Unit type	ST ECOPACK Grade	
16.38	mg	Each	ECOPACK® 3	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable ; if coating is used or other bulk termination : add in comments	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		



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Package Designator	Size	Nbr of instances	Shape	
D50	2.9- 1.6-1.05	5	gull wing	
Comment	Package: SOT 23-5; MD valid for TS391RILT			

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-15th June 2015				
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	YYWY*0391AD6					
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 materials	0.55	mg	supplier	die	Silicon (Si)	7440-21-3		0.538	mg	978182	32855
Silicon Die				supplier	metallization	Aluminium (Al)	7429-90-5		0.004	mg	7273	244
Silicon Die				supplier	Passivation	Silicon Nitride	12033-89-5		0.002	mg	3636	122
Silicon Die				supplier	Passivation	Silicon Oxide	7631-86-9		0.003	mg	5455	183
Silicon Die				supplier	glass coating	Glass: Silicon Dioxide	7631-86-9		0.003	mg	5455	183
Lead-frame	Copper & its alloys	7.119	mg	supplier	alloy	Copper (Cu)	7440-50-8		6.857	mg	963197	418748
Lead-frame				supplier	alloy	Iron (Fe)	7439-89-6		0.161	mg	22616	9832
Lead-frame				supplier	alloy	Phosphorus (P)	12185-10-3		0.002	mg	281	122
Lead-frame				supplier	alloy	Zinc (Zn)	7440-66-6		0.009	mg	1264	550
Lead-frame				supplier	metallization	Nickel (Ni)	7440-02-0		0.082	mg	11518	5008
Lead-frame				supplier	metallization	Palladium (Pd)	7440-05-3		0.007	mg	983	427
Lead-frame				supplier	metallization	Gold (Au)	7440-57-5		0.001	mg	140	61
Die Attach	Other Organic Material	0.224	mg	supplier	glue or tape (choose)	Silver (Ag)	7440-22-4		0.153	mg	683036	9344
Die Attach				supplier	glue or tape	methylene diacrylate	42594-17-2		0.056	mg	250000	9420
Die Attach				supplier	glue or tape	Dicyclopentenloxyethyl methacrylate	68586-19-6		0.007	mg	31250	427
Die Attach				supplier	glue or tape	Polymer of Polybutadiene + Anhydride	Proprietary		0.007	mg	31250	427
Die Attach				supplier	glue or tape	Bis(α,α-dimethylbenzyl) peroxide	80-43-3		0.001	mg	4464	61
Bonding Wire	Precious metals	0.058	mg	supplier	wire	Gold (Au)	7440-57-5		0.058	mg	1000000	3542
encapsulation	Other Inorganic Material	8.424	mg	supplier	mold compound	Silica, vitreous	60676-86-0		7.294	mg	865859	445435
encapsulation				supplier	mold compound	phenolic resin	Proprietary		0.269	mg	31933	16427
encapsulation				supplier	mold compound	epoxy resin	Proprietary		0.307	mg	36443	18748
encapsulation				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.154	mg	18281	9405
encapsulation				supplier	mold compound	carbon black	1333-86-4		0.016	mg	1899	977
encapsulation				supplier	mold compound	Zinc hydroxide	20427-58-1		0.077	mg	9141	4702
encapsulation				supplier	mold compound	Magnesium hydroxide	1309-42-8		0.307	mg	36443	18748