



Materials Declaration Form

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

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2015-09-25
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
	HYWY*1871AR6	A	ZS1A	2015-09-25
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 TS1871AILT - TS1871ILT - TSV321RAILT - TSV321RILT			

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	HWY*1871AR6					
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	0.834	mg	supplier	die	Silicon (Si)	7440-21-3		0.827	mg	991607	50504
Silicon Die				supplier	metallization	Aluminium (Al)	7429-90-5		0.003	mg	3597	183
Silicon Die				supplier	passivation	Silicon Nitride (SiN)	12033-89-5		0.002	mg	2398	122
Silicon Die				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.002	mg	2398	122
Lead-frame	Copper & its alloys	7.07	mg	supplier	alloy	Copper (Cu)	7440-50-8		6.81	mg	963225	415878
Lead-frame				supplier	alloy	Iron (Fe)	7439-89-6		0.16	mg	22631	9771
Lead-frame				supplier	alloy	Phosphorus (P)	12185-10-3		0.002	mg	283	122
Lead-frame				supplier	alloy	Zinc (Zn)	7440-66-6		0.009	mg	1273	550
Lead-frame				supplier	metallization	Nickel (Ni)	7440-02-0		0.081	mg	11457	4947
Lead-frame				supplier	metallization	Palladium (Pd)	7440-05-3		0.007	mg	990	427
Lead-frame				supplier	metallization	Gold (Au)	7440-57-5		0.001	mg	141	61
Die Attach	Other Organic Material	0.07	mg	Supplier	Glue	Epoxyde Bisphenol A Resin	25068-38-6		0.02	mg	285714	1221
Die Attach				Supplier	Glue	Aromatic amine	Proprietary		0.003	mg	42857	183
Die Attach				Supplier	Glue	Glycol ether ester	Proprietary		0.003	mg	42857	183
Die Attach				Supplier	Glue	silica	60676-86-0		0.021	mg	300000	1282
Die Attach				Supplier	Glue	Aluminium oxide	1344-28-1		0.023	mg	328571	1405
Bonding Wire	Precious metals	0.034	mg	supplier	wire	Gold (Au)	7440-57-5		0.034	mg	1000000	2076
encapsulation	Other Inorganic Material	8.367	mg	supplier	mold compound	Silica, vitreous	60676-86-0		7.246	mg	866021	442504
encapsulation				supplier	mold compound	phenolic resin	Proprietary		0.267	mg	31911	16305
encapsulation				supplier	mold compound	epoxy resin	Proprietary		0.305	mg	36453	18626
encapsulation				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.153	mg	18286	9344
encapsulation				supplier	mold compound	carbon black	1333-86-4		0.015	mg	1793	916
encapsulation				supplier	mold compound	Zinc hydroxide	20427-58-1		0.076	mg	9083	4641
encapsulation				supplier	mold compound	Magnesium hydroxide	1309-42-8		0.305	mg	36453	18626