



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 *	2016-06-03
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Floriana San Biagio	Representative Title	AMG MD CHAMPION
Representative Phone *	Refer to Supplier Comment section		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/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
	IYWY*0391AD6	A	ZS1A	2016-06-03
Amount	UoM	Unit type	ST ECOPACK Grade	
16.37	mg	Each	ECOPACK® 3	
	Comment	ECOPACK® 3 is STMicroelectronics trade name for ROHS compliant device without use of any ROHS exemption and without Halogen nor Antimony		

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	
NAC	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SOT	2.9x1.6x1.05	5	gull wing	
Comment	Package: WY SOT 23-5; MDF valid for TS391ILT			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
1 - Product(s) meets EU RoHS requirement without any exemptions	true
2 - 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
3 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	false
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Exemption Id.	Description

QueryList : REACH-17th December 2015				
Query				Response
1 - Product(s) 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	IYVY*0391AD6					
note : Substance present with less 0.001mg will not be declared in this document												
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	Other inorganic materials	0.558	mg	supplier	die	Silicon (Si)	7440-21-3		0.549	mg	983871	33537
				supplier	metallization	Aluminium (Al)	7429-90-5		0.004	mg	7168	244
				supplier	Passivation	Silicon Nitride	12033-89-5		0.002	mg	3584	122
				supplier	Passivation	Silicon Oxide	7631-86-9		0.003	mg	5376	183
Leadframe	Copper & its alloys	7.054	mg	supplier	alloy	Copper (Cu)	7440-50-8		6.784	mg	961724	414417
				supplier	alloy	Iron (Fe)	7439-89-6		0.165	mg	23391	10079
				supplier	alloy	Phosphorus (P)	12185-10-3		0.002	mg	284	122
				supplier	alloy	Zinc (Zn)	7440-66-6		0.009	mg	1276	550
				supplier	metallization	Nickel (Ni)	7440-02-0		0.085	mg	12050	5192
				supplier	metallization	Palladium (Pd)	7440-05-3		0.007	mg	992	428
				supplier	metallization	Gold (Au)	7440-57-5		0.002	mg	284	122
				supplier	glue	Epoxyde Bisphenol A Resin	25068-38-6		0.021	mg	295775	1283
Die attach	Other Organic Materials	0.071	mg	supplier	glue	Aromatic amine	Proprietary		0.003	mg	42254	183
				supplier	glue	Glycol ether ester	Proprietary		0.003	mg	42254	183
				supplier	glue	silica	60676-86-0		0.021	mg	295775	1283
				supplier	glue	Aluminium oxide	1344-28-1		0.023	mg	323944	1405
				supplier	wire	Gold (Au)	7440-57-5		0.153	mg	1000000	9346
Bonding wires	Precious metals	0.153	mg	supplier	wire	Gold (Au)	7440-57-5		0.153	mg	1000000	9346
				supplier	mold compound	Silica, vitreous	60676-86-0		7.369	mg	863487	450153
				supplier	mold compound	phenolic resin	Proprietary		0.278	mg	32576	16982
				supplier	mold compound	epoxy resin	Proprietary		0.316	mg	37028	19304
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.158	mg	18514	9652
				supplier	mold compound	carbon black	1333-86-4		0.016	mg	1875	977
				supplier	mold compound	Zinc hydroxide	20427-58-1		0.081	mg	9491	4948
				supplier	mold compound	Magnesium hydroxide	1309-42-8		0.316	mg	37028	19304