



life.augmented

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 *	2016-05-04
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	Representative Email *	Refer to Supplier Comment section
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/web/en/support/support.html		

Uncertainty Statement

While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.


Legal Statement

Supplier Acceptance *	true	Legal Declaration *	Standard
------------------------------	-------------	----------------------------	-----------------

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
	HYW8*3021BRL	A	ZS1A	2016-05-04
	Amount	UoM	Unit type	ST ECOPACK Grade
	6.00	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	2x1.26x0.93	5	gull wing	
Comment	Package: W8 SOT 323 5LDS; MDF valid for TS3021ICT			

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 : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	HW8*3021BRL					
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	0.398	mg	supplier	die	Silicon (Si)	7440-21-3		0.385	mg	967337	64167
				supplier	metallization	Aluminium (Al)	7429-90-5		0.004	mg	10050	667
				supplier	Passivation	Silicon Nitride	12033-89-5		0.001	mg	2512	165
				supplier	Passivation	Silicon Oxide	7631-86-9		0.008	mg	20101	1333
Leadframe	Copper & its alloys	2.623	mg	supplier	alloy	Copper (Cu)	7440-50-8		2.549	mg	971788	424833
				supplier	alloy	Iron (Fe)	7439-89-6		0.060	mg	22875	10000
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.004	mg	1525	667
				supplier	alloy	Zinc (Zn)	7440-66-6		0.003	mg	1144	500
				supplier	metallization	Nickel (Ni)	7440-02-0		0.005	mg	1906	833
				supplier	metallization	Palladium (Pd)	7440-05-3		0.001	mg	381	167
				supplier	metallization	Gold (Au)	7440-57-5		0.001	mg	381	167
Die attach	Other Organic Materials	0.068	mg	supplier	glue	Epoxyde Bisphenol A Resin	25068-38-6		0.006	mg	88235	1000
				supplier	glue	Fused Silica	60676-86-0		0.021	mg	308824	3500
				supplier	glue	Ethylidiglycol acetate	112-15-2		0.015	mg	220588	2500
				supplier	glue	Aluminium oxide	1344-28-1		0.014	mg	205882	2333
				supplier	glue	Bisphenol A diglycidyl ether polymer	25036-25-3		0.010	mg	147059	1667
				supplier	glue	Glycol ether ester	Proprietary		0.001	mg	14706	167
				supplier	glue	Diaminodiphenylsulfone	80-08-0		0.001	mg	14706	167
				supplier	wire	Gold (Au)	7440-57-5		0.058	mg	1000000	9667
				supplier	mold compound	Silica, vitreous	60676-86-0		2.457	mg	861199	409500
Encapsulation	Other Organic Materials	2.853	mg	supplier	mold compound	epoxy resin	Proprietary		0.164	mg	57483	27333
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.141	mg	49422	23500
				supplier	mold compound	phenolic resin	Proprietary		0.085	mg	29793	14167
				supplier	mold compound	carbon black	1333-86-4		0.006	mg	2103	1000