



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 *	2018-10-08
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Floriana SAN BIAGIO	Representative Title	AMS 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


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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 omprehensive 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*3011AAY	A	ZS1A	2018-10-08
Amount	UoM	Unit type	ST ECOPACK Grade	
16.38	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	2.9x1.6 x1.05	5	gull wing	
Comment	WY SOT 23-5; MDF valid for TS3011IYLT			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 2015	
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-27th June 2018				
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	HYWY*3011AAY					
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	0.152	mg	supplier	die	Silicon (Si)	7440-21-3		0.143	mg	940789	8730
				supplier	metallization	Aluminium (Al)	7429-90-5		0.002	mg	13158	122
				supplier	metallization	Tungsten (W)	7440-33-7		0.002	mg	13158	122
				supplier	Passivation	Silicon Nitride	12033-89-5		0.001	mg	6579	61
				supplier	Passivation	Silicon Oxide	7631-86-9		0.004	mg	26316	244
Leadframe	Copper & its alloys	6.971	mg	supplier	alloy	Copper (Cu)	7440-50-8		6.697	mg	960694	408852
				supplier	alloy	Iron (Fe)	7439-89-6		0.169	mg	24243	10317
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.002	mg	287	122
				supplier	alloy	Zinc (Zn)	7440-66-6		0.009	mg	1291	549
				supplier	metallization	Nickel (Ni)	7440-02-0		0.086	mg	12337	5250
				supplier	metallization	Palladium (Pd)	7440-05-3		0.007	mg	1004	427
				supplier	metallization	Gold (Au)	7440-57-5		0.001	mg	143	61
				supplier	metallization	Nickel (Ni)	7440-02-0		0.086	mg	12337	5250
				supplier	metallization	Palladium (Pd)	7440-05-3		0.007	mg	1004	427
				supplier	metallization	Gold (Au)	7440-57-5		0.001	mg	143	61
Die attach	Other Organic Materials	0.080	mg	supplier	glue	Polyoxypropylenediamine	9046-10-0		0.058	mg	725000	3541
				supplier	glue	Phenol resin	9003-35-4		0.013	mg	162500	794
				supplier	glue	Gold (Au)	7440-57-5		0.003	mg	37500	183
				supplier	glue	Amorphous silica	7631-86-9		0.003	mg	37500	183
				supplier	glue	Poly[(O-Cresyl glycidyl ether)-co-Formaldehyde]	37382-79-9		0.001	mg	12500	61
supplier	glue	Phenol resin	9003-35-4		0.002	mg	25000	122				
Bonding wires	Precious metals	0.158	mg	supplier	wire	Brominated epoxy resin	68541-56-0		0.158	mg	1000000	9646
Encapsulation	Other Organic Materials	9.019	mg	supplier	mold compound	Epoxy Resin	25068-38-6		0.357	mg	39583	21795
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.134	mg	14858	8181
				supplier	mold compound	Phenol resin	29690-82-2		0.373	mg	41357	22772
				supplier	mold compound	Silica	60676-86-0		7.229	mg	801530	441331
				supplier	mold compound	Carbon Black	1333-86-4		0.016	mg	1774	977
				supplier	mold compound	Zinc hydroxide	20427-58-1		0.166	mg	18406	10134
				supplier	mold compound	Magnesium hydroxide	1309-42-8		0.744	mg	82493	45421
				supplier	mold compound							