



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 *	2018-06-18
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
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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*UY27AAA	A	ZS1A	2018-06-18
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		 life.augmented
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
ting is used or other bulk terminat	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	2.8x2.6x0.9	5	gull wing	
Comment	WY SOT 23-5; MDF valid for TSX6311LT			

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-15th January 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	IYWY*UY27AAA						
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	0.819	mg	supplier	die	Silicon (Si)	7440-21-3		0.795	mg	970696	48550	
				supplier	Passivation	Silicon Nitride	12033-89-5		0.002	mg	2442	122	
				supplier	Passivation	Silicon Oxide	7631-86-9		0.013	mg	15873	794	
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.009	mg	10989	550	
Leadframe	Copper & its alloys	7.156	mg	supplier	alloy	Copper (Cu)	7440-50-8		6.893	mg	963248	420947	
				supplier	alloy	Iron (Fe)	7439-89-6		0.161	mg	22499	9832	
				supplier	alloy	Phosphorus (P)	12185-10-3		0.002	mg	279	122	
				supplier	alloy	Zinc (Zn)	7440-66-6		0.009	mg	1258	550	
				supplier	metallization	Nickel (Ni)	7440-02-0		0.083	mg	11599	5069	
				supplier	metallization	Palladium (Pd)	7440-05-3		0.007	mg	978	427	
Die attach	Other Organic Materials	0.069	mg	supplier	metallization	Gold (Au)	7440-57-5		0.001	mg	140	61	
				supplier	glue	Silver (Ag)	7440-22-4		0.047	mg	681159	2870	
				supplier	glue	methylene diacrylate	42594-17-2		0.018	mg	260870	1099	
				supplier	glue	Dicyclopentenyloxyethyl methacrylate	68586-19-6		0.002	mg	28986	122	
Bonding wires	Precious metals	0.149	mg	supplier	glue	Polymer of Polybutadiene + Anhydride	Proprietary		0.002	mg	28986	122	
				supplier	wire	Gold (Au)	7440-57-5		0.149	mg	1000000	9099	
Encapsulation	Other Organic Materials	8.181	mg	supplier	mold compound	Silica, vitreous	60676-86-0		6.983	mg	853563	426443	
				supplier	mold compound	phenolic resin	29690-82-2		0.285	mg	34837	17405	
				supplier	mold compound	epoxy resin	25068-38-6		0.326	mg	39848	19908	
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.163	mg	19924	9954	
				supplier	mold compound	carbon black	1333-86-4		0.016	mg	1956	977	
				supplier	mold compound	Zinc hydroxide	20427-58-1		0.082	mg	10023	5008	
				supplier	mold compound	Magnesium hydroxide	1309-42-8		0.326	mg	39848	19908	