



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 *	2018-07-27
Company Unique ID	NL 008751171801		
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Contact Email *	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
	HVWV*UQ64BA5	A	ZS1A	2018-07-27
Amount	UoM	Unit type	ST ECOPACK Grade	
16	mg	Each	ECOPACK® 2	
	Comment	ECOPACK® 2 is STMicroelectronics trade name for ROHS compliant device without Brominated and Chlorinated compound (900ppm) and without Antimony oxide flame retardant (in each organic material)		

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	
Not Applicable	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SOT	2.8x1.5x0.9	5	gull wing	
Comment	WV SOT 23 5L; MDF valid for STLQ015M33R			

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 : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	HVWV*UQ648A5				4999999.0	999943.0				
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)				
Die	M-011 Other inorganic materials	0.339	mg	supplier	die	Silicon (Si)	7440-21-3		0.320	mg	943953	20000				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.004	mg	11799	250				
				supplier	metallization	Tungsten (W)	7440-33-7		0.003	mg	8850	188				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.001	mg	2950	63				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.007	mg	20649	438				
				supplier	polymer die coating	PIXL Gamma-butyrolactone	96-48-0		0.004	mg	11799	250				
				Leadframe	M-004 Copper and its alloys	7.063	mg	supplier	alloy	Copper (Cu)	7440-50-8		6.831	mg	967153	426938
								supplier	alloy	Phosphorus (P)	12185-10-3		0.001	mg	142	63
supplier	alloy	Zinc (Zn)	7440-66-6						0.004	mg	566	250				
supplier	alloy	Iron (Fe)	7439-89-6						0.148	mg	20954	9250				
supplier	metallization	Nickel (Ni)	7440-02-0						0.071	mg	10052	4438				
supplier	metallization	Palladium (Pd)	7440-05-3						0.007	mg	991	438				
supplier	metallization	Gold (Au)	7440-57-5						0.001	mg	142	63				
Die attach	M-015 Other organic materials	0.034	mg					supplier	glue	Silver (Ag)	7440-22-4		0.029	mg	852941	1813
				supplier	glue	Carbocyclic acrylate	Proprietary		0.003	mg	88235	188				
				supplier	glue	2-Propenoic acid, 2-methyl-, 2-[(2,3,3a,4,7,7a)or 3a	68586-19-6		0.002	mg	58824	125				
				supplier	wire	Gold (Au)	7440-57-5		0.158	mg	1000000	9875				
Encapsulation	M-015 Other organic materials	8.405	mg	supplier	mold compound	Epoxy Resin-1	Proprietary		0.168	mg	19988	10500				
				supplier	mold compound	Epoxy Resin-2	25068-38-6		0.168	mg	19988	10500				
				supplier	mold compound	Phenol resin	29690-82-2		0.336	mg	39976	21000				
				supplier	mold compound	Amorphous Silica	60676-86-0		7.481	mg	890065	467563				
				supplier	mold compound	Carbon Black	1333-86-4		0.042	mg	4997	2625				
				supplier	mold compound	Crystalline silica	14808-60-7		0.210	mg	24985	13125				