



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 *	2018-01-12
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
	YYWB*U1B3AAA	A	ZS1A	2018-01-12
Amount	UoM	Unit type	ST ECOPACK Grade	
16.8	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	
DSO	2.9x1.625x1.175	6	gull wing	
Comment	Package: WB SOT 23 - 6L; MDF valid for PM8851D			

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-7th July 2017				
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	YYWB*U1B3AAA				4999999.0	999882.0
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	0.454	mg	supplier	die	Silicon (Si)	7440-21-3		0.432	mg	951542	25714
				supplier	metallization	Aluminium (Al)	7429-90-5		0.003	mg	6608	179
				supplier	metallization	Tungsten (W)	7440-33-7		0.004	mg	8811	238
				supplier	Passivation	Silicon Nitride	12033-89-5		0.001	mg	2203	60
				supplier	Passivation	Silicon Oxide	7631-86-9		0.011	mg	24229	655
				supplier	back side metallization	Gold (Au)	7440-57-5		0.001	mg	2203	60
Leadframe	M-004 Copper and its alloys	8.668	mg	supplier	back side metallization	Nickel (Ni)	7440-02-0		0.002	mg	4405	119
				supplier	alloy	Copper (Cu)	7440-50-8		8.351	mg	963429	497083
				supplier	alloy	Iron (Fe)	7439-89-6		0.195	mg	22497	31607
				supplier	alloy	Phosphorus (P)	7723-14-0		0.002	mg	231	119
				supplier	alloy	Zinc (Zn)	7440-66-6		0.011	mg	1269	655
				supplier	metallization	Nickel (Ni)	7440-02-0		0.100	mg	11537	5952
Die Attach	M-006 Nickel and its alloys	0.081	mg	supplier	metallization	Palladium (Pd)	7440-05-3		0.008	mg	923	476
	M-008 Precious metals			supplier	metallization	Gold (Au)	7440-57-5		0.001	mg	115	60
	M-008 Precious metals			supplier	glue	Silver (Ag)	7440-22-4		0.067	mg	827160	3988
Bonding wires	M-011 Other inorganic materials	0.181	mg	supplier	glue	Carbocyclic Acrylates	proprietary		0.008	mg	98765	476
				supplier	glue	Bismaleimide resin	35325-39-4		0.002	mg	24691	119
				supplier	glue	Z-preponic acid, 2-methyl	68586-19-6		0.002	mg	24691	119
				supplier	glue	Additive	proprietary		0.002	mg	24691	119
Encapsulation	M-015 Other organic materials	7.414	mg	supplier	wire	Cu	7440-50-8		0.177	mg	977901	10536
				supplier	molding compound	Palladium (Pd)	7440-05-3		0.004	mg	22099	238
				supplier	molding compound	Epoxy Resin-1	29690-82-2		0.223	mg	30078	13274
				supplier	molding compound	Epoxy Resin-2	Proprietary		0.223	mg	30078	13274
				supplier	molding compound	Phenol resin	25068-38-6		0.334	mg	45050	19881
				supplier	molding compound	Silica	60676-86-0		6.472	mg	872943	385238
				supplier	molding compound	Carbon Black	1333-86-4		0.014	mg	1888	833
				supplier	molding compound	Others	-		0.148	mg	19962	8810