



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D * : Required Field

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2018-10-26
Company Unique ID	NL 008751171B01		
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

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
	HVW9*V847AAJ	A	ZS1A	2018-10-26
Amount	UoM	Unit type	ST ECOPACK Grade	
6	mg	Each	ECOPACK® 1	
Comment	ECOPACK® or ECOPACK® 1 is STMicroelectronics trade name for ROHS compliant devices			

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	2x1.26x0.93	3	gull wing
Comment	W9 SOT 323 - 3 LEADS; MDF valid for TS4061AICT-1.25		

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	HVV9*V847AAJ				5000000.0	1000005.0
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	0.321	mg	supplier	die	Silicon (Si)	7440-21-3		0.302	mg	940810	50333
				supplier	metallization	Aluminium (Al)	7429-90-5		0.004	mg	12461	667
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	3115	167
				supplier	metallization	Tungsten (W)	7440-33-7		0.004	mg	12461	667
				supplier	Passivation	Silicon Nitride	12033-89-5		0.001	mg	3115	167
				supplier	Passivation	Silicon Oxide	7631-86-9		0.009	mg	28037	1500
Leadframe	M-004 Copper and its alloys	2.501	mg	supplier	alloy	Copper (Cu)	7440-50-8		2.411	mg	963670	401750
				supplier	alloy	Iron (Fe)	7439-89-6		0.056	mg	22548	9400
				supplier	alloy	Phosphorus (P)	7723-14-0		0.001	mg	240	300
				supplier	alloy	Zinc (Zn)	7440-66-6		0.003	mg	1249	521
				supplier	metallization	Nickel (0.8-1.5%)	7440-02-0		0.029	mg	11494	4792
				supplier	metallization	Palladium (Pd)	7440-05-3		0.001	mg	400	167
Die attach	M-015 Other organic materials	0.043	mg	supplier	glue	Aluminium oxide	1344-28-1		0.014	mg	320000	2304
				supplier	glue	Carbinol acetate	112-15-2		0.010	mg	220000	1584
				supplier	glue	Epoxy Cresol Novolac Resin	29690-82-2		0.008	mg	180000	1296
				supplier	glue	CP Bisph. A diglycidyl ether+Bisph. A	25036-25-3		0.004	mg	100000	720
				supplier	glue	Epiclorohyd-bisphenol A resin MW	25068-38-6		0.002	mg	50000	360
				supplier	glue	Dapsone	80-08-0		0.002	mg	50000	360
Bonding wires	M-008 Precious metals	0.033	mg	supplier	wire	Gold (Au)	7440-57-5		0.003	mg	80000	576
				supplier	wire	Gold (Au)	7440-57-5		0.033	mg	1000000	5500
Encapsulation	M-015 Other organic materials	3.101	mg	supplier	mold compound	Solid Epoxy Resin-1	Proprietary		0.062	mg	20134	10407
				supplier	mold compound	Solid Epoxy Resin-2	29690-82-2		0.062	mg	20134	10407
				supplier	mold compound	Phenol resin	25068-38-6		0.125	mg	40268	20815
				supplier	mold compound	Amorphous Silica	60676-86-0		2.758	mg	889264	459667
				supplier	mold compound	Carbon Black	1333-86-4		0.016	mg	5033	2602
				supplier	mold compound	Crystalline silica	14808-60-7		0.078	mg	25167	13009