



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 *	2017-06-27
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	AMG 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
	PZO7*KA05FC1	A	SH1A	2017-06-27
Amount	UoM	Unit type	ST ECOPACK Grade	
76.29	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	4.9x3.9x1.75	8	gull wing	
Comment	PACKAGE: O7 SO 08 .15 JEDEC; MDF valid for LM2931AD50R			

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-12th January 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	PZ07*KA05FC1				5000000.0	1000015.0	
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	1.827	mg	supplier	die	Silicon (Si)	7440-21-3		1.785	mg	977011	23398	
				supplier	metallization	Aluminium (Al)	7429-90-5		0.023	mg	12589	301	
				supplier	Passivation	Silicon Nitride	12033-89-5		0.008	mg	4379	105	
				supplier	Passivation	Silicon Oxide	7631-86-9		0.011	mg	6021	144	
Leadframe	M-004 Copper and its alloys	29.237	mg	supplier	alloy	Copper (Cu)	7440-50-8		28.245	mg	966070	370232	
				supplier	alloy	Iron (Fe)	7439-89-6		0.664	mg	22711	8704	
				supplier	alloy	Zinc (Zn)	7440-66-6		0.035	mg	1197	459	
				supplier	metallization	Nickel (Ni)	7440-02-0		0.268	mg	9166	3513	
	M-008 Precious metals		supplier	metallization	Palladium (Pd)	7440-05-3		0.009	mg	308	118		
	M-008 Precious metals		supplier	metallization	Gold (Au)	7440-57-5		0.008	mg	274	105		
			supplier	metallization	Silver (Ag)	7440-22-4		0.008	mg	274	105		
	Die attach	M-015 Other organic materials	0.683	mg	supplier	glue	Silver (Ag)	7440-22-4		0.599	mg	877013	7852
					supplier	glue	Isobornyl Methacrylate	7534-94-3		0.034	mg	49780	446
					supplier	glue	Urethane Methacrylate Resin	5888-33-5		0.034	mg	49780	446
supplier					glue	Acrylate polymer	87320-05-6		0.014	mg	20498	184	
supplier					glue	Epoxyoctahydroxyethyltrimethoxysilane	3388-04-3		0.001	mg	1464	13	
supplier					glue	tert-Butyl peroxy(2-ethyl)-hexanoate	3006-82-4		0.001	mg	1464	13	
Bonding wires	M-015 Other organic materials	0.041	mg	supplier	wire	Copper (Cu)	7440-50-8		0.041	mg	1000000	537	
Encapsulation	M-011 Other inorganic materials	44.503	mg	supplier	mold compound	Silica, vitreous	60676-86-0		38.539	mg	865987	505165	
				supplier	mold compound	Epoxy Resin	25068-38-6		3.338	mg	75006	43754	
				supplier	mold compound	Phenol Resin	29690-82-2		2.225	mg	49997	29165	
				supplier	mold compound	Carbon black	1333-86-4		0.223	mg	5011	2923	
				supplier	mold compound	Bismuth compound	7440-69-9		0.178	mg	4000	2333	