



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 *	2018-07-17
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
	HZGR*LW05FC1	A	SH1A	2018-07-17
	Amount	UoM	Unit type	ST ECOPACK Grade
	331.3	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	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	6.085x6.61x2.3	3	gull wing	
Comment	GR TO-252 DPAK Cu Wire; MDF valid for L4931CDT50-TR, L4931ABDT50-TR			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-March 2015	
Query	Response
1 - Product(s) meets EU RoHS requirement without any exemptions	FALSE
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)	TRUE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption Id.	Description
7a	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)

QueryList : ELV directive : 2000/53/EC amended 2017/2096 _November 2017	
Query	Response
1 - Product(s) meets EU ELV requirements without any exemptions	TRUE
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	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				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Lead	1000 ppm	1.76	Die attach	5309

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	HZGR* LW05FC1				6000002.0	1000001.0
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	5.421	mg	supplier	die	Silicon (Si)	7440-21-3		2.098	mg	387013	6333
				supplier	metallization	Aluminium (Al)	7429-90-5		0.027	mg	4981	81
				supplier	Passivation	Silicon Nitride	12033-89-5		0.009	mg	1660	27
				supplier	Passivation	Silicon Oxide	7631-86-9		0.012	mg	2214	36
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.091	mg	16787	275
				supplier	back side metallization	Silver (Ag)	7440-22-4		3.184	mg	587346	9611
Leadframe	M-004 Copper and its alloys	183.855	mg	supplier	alloy	Copper (Cu)	7440-50-8		183.616	mg	998700	554229
				supplier	alloy	Iron (Fe)	7439-89-6		0.085	mg	462	257
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.154	mg	838	465
Soft solder	Solder	1.842	mg	SVHC	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	1.759	mg	954940	5309
				supplier	solder	Silver (Ag)	7440-22-4		0.046	mg	24973	139
				supplier	solder	Tin (Sn)	7440-31-5		0.037	mg	20087	112
				supplier	wire	Copper (Cu)	7440-50-8		0.107	mg	1000000	323
Encapsulation	M-015 Other organic materials	139.030	mg	supplier	mold compound	Silica, vitreous	60676-86-0		121.651	mg	874998	367193
				supplier	mold compound	Tetramethyl-biphenyl-diy-bis oxymethylene-bi	85954-11-6		5.561	mg	39999	16785
				supplier	mold compound	Epoxy Resin	29690-82-2		4.171	mg	30001	12590
				supplier	mold compound	phenol resin	25068-38-6		6.952	mg	50004	20984
				supplier	mold compound	Carbon black	1333-86-4		0.695	mg	4999	2098
connections coating	Solder	1.045	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		1.045	mg	1000000	3154