



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 *	2016-09-20
Contact Name *	Refer to "Supplier Comment" section	Contact Title	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 Materials Declaration 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/internet/com/support/online_tech_support.jsp		

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
	MF39*KR05FC1	A	Z8GA	2016-09-20
Amount	UoM	Unit type	ST ECOPACK Grade	
59.00	mg	Each	ECOPACK® 2	

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 ; if coating is used o	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SOT	4.5X2.45X1.5	4	gull wing	
Comment	Package: 39 SOT 89; MDF valid for CP LD2981ABU50TR			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	true
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
Product(s) meets EU RoHS requirements by application of the selected exemption(s)	false
Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Product(s) is obsolete, no information is available	false
Product(s) is unknown, no information is available	false
Exemption Id.	Description

QueryList : REACH-20 June 2016				
Query				Response
The product 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						Mfr Item Name	MF39*KR05FC1					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	Other inorganic materials	0.939	mg	supplier	die	Silicon (Si)	7440-21-3		0.912	mg	971246	15458
Die				supplier	metallization	Aluminium (Al)	7429-90-5		0.015	mg	15974	254
Die				supplier	passivation	Silicon Nitride	12033-89-5		0.004	mg	4260	68
Die				supplier	passivation	Silicon Oxide	7631-86-9		0.008	mg	8520	136
Leadframe	Copper and its alloy	31.77	mg	supplier	Alloy	Copper(CU)	7440-50-8		31.538	mg	992698	534542
Leadframe				supplier	Alloy	Iron(Fe)	7439-89-6		0.032	mg	1007	542
Leadframe				supplier	Alloy	Phosphorus(P)	12185-10-3		0.01	mg	315	169
Leadframe				supplier	metallization	Silver(Ag)	7440-22-4		0.19	mg	5980	3220
Die attach	Other organic materials	0.2	mg	supplier	Glue	Silver(Ag)	7440-22-4		0.148	mg	740000	2508
Die attach				supplier	Glue	Epoxy Resin	proprietary		0.03	mg	150000	508
Die attach				supplier	Glue	Aliphatic anhydride	proprietary		0.014	mg	70000	237
Die attach				supplier	Glue	2-Butoxyethyl acetate	112-07-2		0.004	mg	20000	68
Die attach				supplier	Glue	Polymeric material	proprietary		0.004	mg	20000	68
Bonding wire	Precious metals	0.048	mg	supplier	Bonding wire	Gold(Au)	7440-57-5		0.048	mg	1000000	814
Encapsulation	Other organic materials	24.877	mg	supplier	Molding compound	Silica Fused	60676-86-0		21.941	mg	881979	371881
Encapsulation				supplier	Molding compound	Epoxy,Cresol Novolac	29690-82-2		0.373	mg	14994	6322
Encapsulation				supplier	Molding compound	Phenol Resin	proprietary		1.244	mg	50006	21085
Encapsulation				supplier	Molding compound	Epoxy Resin	proprietary		1.244	mg	50006	21085
Encapsulation				supplier	Molding compound	Carbon Black	1333-86-4		0.075	mg	3015	1271
Finishing	Other inorganic materials	1.166	mg	supplier	Connections coating	Tin(Sn)	7440-31-5		1.166	mg	1000000	19763