



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 *	2015-11-27
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Rossana Bonaccorso	Representative Title	IPD 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
TL1431CZ-AP	HVSA*M431AC6	A	Z4XA	2015-11-27
Amount		UoM	Unit type	ST ECOPACK Grade
220.00		mg	Each	ECOPACK® 2

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles	 life.augmented	
NAC	NAC	NAC		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	4.6X4.6X3.5	3	Through-hole	
Comment	Package: TO 92 Epoxy			

QueryList : ROHS directive 2011/65/EU _ July 2011	
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
5 - Product(s) is obsolete, no information is available	false
6 - Product(s) is unknown, no information is available	false
Exemption Id.	Description

QueryList : REACH-15th June 2015				
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						Mfr Item Name	HVSA*M431AC6					
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	0.429	mg	supplier	die	Silicon (Si)	7440-21-3		0.422	mg	983683	1918
				supplier	metallization	Aluminium (Al)	7429-90-5		0.003	mg	6993	14
				supplier	Passivation	Silicon Nitride	12033-89-5		0.002	mg	4662	9
				supplier	Passivation	Silicon Oxide	7631-86-9		0.002	mg	4662	9
Lead frame	Copper and its alloy	101.438	mg	supplier	alloy	Copper(Cu)	7440-50-8		101.335	mg	998985	460614
				supplier	alloy	Phosphorus(P)	12185-10-3		0.031	mg	306	141
				supplier	alloy	Iron(Fe)	7439-89-6		0.072	mg	710	327
				supplier	glue	Silver(Ag)	7440-22-4		0.124	mg	704545	564
Die attach	Other organic materials	0.176	mg	supplier	glue	Bisphenol F type epoxy resin	9003-36-5		0.036	mg	204545	164
				supplier	glue	Phenol derivative	proprietary		0.008	mg	45455	36
				supplier	glue	Di propylene glycol mono methyl ether	34590-94-8		0.008	mg	45455	36
				supplier	Bonding wire	Gold (Au)	7440-57-5		1.076	mg	1000000	4891
Bonding wire	Precious metals	1.076	mg	supplier	Bonding wire	Gold (Au)	7440-57-5		1.076	mg	1000000	4891
				supplier	Moulding Compound	Silica Crystal	14808-60-7		97.386	mg	849983	442664
				supplier	Moulding Compound	Epoxy Resin	29690-82-2		11.458	mg	100005	52082
				supplier	Moulding Compound	Phenol Resin	9003-35-4		5.161	mg	45045	23459
Encapsulation	Other organic materials	114.574	mg	supplier	Moulding Compound	Carbon Black	1333-86-4		0.569	mg	4966	2586
				supplier	Connections coating	Tin(Sn)	7440-31-5		2.307	mg	1000000	10486
Finishing	Solder	2.307	mg	supplier	Connections coating	Tin(Sn)	7440-31-5		2.307	mg	1000000	10486