



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 *	24-07-2017
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 *	MDG MD CHAMPION	Representative Title	MDG 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
STM32L431C8Y6TR	T387*435XXXZ	A	996S	24-07-2017
Amount	UoM	Unit type	ST ECOPACK Grade	
14,33	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		
Tin/Silver/Copper/Nickel(SACN12505)	NAC	NAC		

Package Designator	Size	Nbr of instances	Shape
WLCSP	Not Applicable	49	No lead
Comment	Package : A04Z WLCSP 49L DIE 435 P 0.4 MM 8579889		

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	T387*435XXXZ				9000001,0	899956,3
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die or dies	M-011 Other inorganic materials	10,196	mg	supplier	die	Silicon (Si)	7440-21-3		9,772	mg	958415	681783
				supplier	metallization	Aluminium (Al)	7429-90-5		0,020	mg	1962	1395
				supplier	metallization	Copper (Cu)	7440-50-8		0,180	mg	17654	12558
				supplier	metallization	Tantalum (Ta)	7440-25-7		0,058	mg	5689	4047
				supplier	metallization	Titanium (Ti)	7440-32-6		0,002	mg	196	140
				supplier	metallization	Tungsten (W)	7440-33-7		0,002	mg	196	140
				supplier	Passivation	Silicon Nitride	12033-89-5		0,046	mg	4512	3209
Plating Seed layer 1	M-011 Other inorganic materials	0,012	mg	supplier	Passivation	Silicon Oxide	7631-86-9		0,116	mg	11377	8093
				supplier	Alloy	Ti	7440-32-6		0,002	mg	200963	170
				supplier	Alloy	Cu	7440-50-8		0,010	mg	799037	675
Re-passivatipon layer	M-011 Other inorganic materials	0,104	mg	supplier	Polymer	4-Butyrolactone	96-48-0		0,094	mg	900000	6558
				supplier	Polymer	1-Methoxy-2-propyl acetate	108-65-6		0,010	mg	100000	729
Redistribution Layer	M-011 Other inorganic materials	0,266	mg	supplier	Alloy	Cu	7440-50-8		0,266	mg	1000000	18561
Plating Seed layer 2	M-011 Other inorganic materials	0,007	mg	supplier	Alloy	Ti	7440-32-6		0,001	mg	200963	94
				supplier	Alloy	Cu	7440-50-8		0,005	mg	799037	372
Re-passivatipon layer	M-011 Other inorganic materials	0,086	mg	supplier	Polymer	4-Butyrolactone	96-48-0		0,078	mg	900000	5410
				supplier	Polymer	1-Methoxy-2-propyl acetate	108-65-6		0,009	mg	100000	601
UBM	M-011 Other inorganic materials	0,229	mg	supplier	Alloy	Cu	7440-50-8		0,229	mg	1000000	15998
Solder ball	Solder	2,995	mg	supplier	Solder	Sn	7440-31-5		2,942	mg	982500	205274
				supplier	Solder	Ag	7440-22-4		0,036	mg	12000	2507
				supplier	Solder	Cu	7440-50-8		0,015	mg	5000	1045
				supplier	Solder	Ni	7440-02-0		0,001	mg	500	104
Back Side Coating	M-011 Other inorganic materials	0,437	mg	supplier	Polymer	Polybutylene terephthalate (PBT)	25038-59-9		0,284	mg	650000	19821
				supplier	Polymer	Silica	Proprietary		0,085	mg	195000	5946
				supplier	Polymer	Proprietary Material-Other Epoxy resins	Proprietary		0,033	mg	75000	2287
				supplier	Polymer	Proprietary Material-Other Acrylic resins	Proprietary		0,033	mg	75000	2287
				supplier	Polymer	Carbon black	1333-86-4		0,002	mg	5000	152