



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 *	2018-01-05
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
	MUCH*UBC7AAY	B	Z7GA	2018-01-05
Amount	UoM	Unit type	ST ECOPACK Grade	
21	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
3	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	
QFN	3x3x0.85	10	flat	
Comment	Package: B02E VFQFPN 3X3X0.85 10L PITCH 0.5; MDF valid for LD59150PURY			

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-7th July 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	MUCH*UBC7AAY				6000001.0	1000004.0
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	1.038	mg	supplier	die	Silicon (Si)	7440-21-3		0.920	mg	886320	43810
				supplier	metallization	Aluminium (Al)	7429-90-5		0.003	mg	2890	143
				supplier	metallization	Copper (Cu)	7440-50-8		0.076	mg	73218	3619
				supplier	passivation	Nickel (Ni)	7440-02-0		0.009	mg	8671	429
				supplier	metallization	Platinum (Pt)	7440-06-4		0.005	mg	4817	238
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	963	48
				supplier	metallization	Tungsten (W)	7440-33-7		0.004	mg	3854	190
				supplier	Passivation	Silicon Nitride	12033-89-5		0.003	mg	2890	143
				supplier	Passivation	Silicon Oxide	7631-86-9		0.017	mg	16378	810
				Leadframe	M-004 Copper and its alloys	5.866	mg	supplier	alloy	Copper (Cu)	7440-50-8	
supplier	alloy	Chromium (Cr)	7440-47-3						0.016	mg	2728	762
supplier	alloy	Tin (Sn)	7440-31-5						0.014	mg	2387	667
supplier	alloy	Zinc (Zn)	7440-66-6						0.011	mg	1875	524
supplier	metallization	Silver (Ag)	7440-22-4						0.117	mg	19945	5571
Die Attach	M-015 Other organic materials	0.151	mg	supplier	glue	Silver (Ag)	7440-22-4		0.108	mg	715232	5143
				supplier	glue	exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl meth	7534-94-3		0.031	mg	205298	1476
				supplier	glue	1,1'-(1,3-phenylene)bis-1H-pyrrole-2,5-dione	3006-93-7		0.010	mg	66225	476
				supplier	glue	Epoxy resin	29690-82-2		0.001	mg	6623	48
				supplier	glue	2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane	3388-04-3		0.001	mg	6623	48
Bonding wires	M-011 Other inorganic materials	0.195	mg	supplier	wire	Copper (Cu)	7440-50-8		0.192	mg	984615	9143
				supplier	wire	Palladium (Pd)	7440-05-3		0.003	mg	15385	143
Encapsulation	M-015 Other organic materials	12.657	mg	supplier	mold compound	Epoxy Resin	29690-82-2		0.633	mg	50012	30143
				supplier	mold compound	Phenol Resin	25068-38-6		0.291	mg	22991	13857
				supplier	mold compound	Silica (Amorphous)A	60676-86-0		10.758	mg	849964	512286
				supplier	mold compound	Silica (Amorphous)B	7631-86-9		0.633	mg	50012	30143
				supplier	mold compound	Metal Hydroxide	Proprietary		0.291	mg	22991	13857
connections coating	M-011 Other inorganic materials	1.093	mg	supplier	solder alloy	Carbon Black	1333-86-4		0.051	mg	4029	2429
				supplier		Tin (Sn)	7440-31-5		1.093	mg	1000000	52048