



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 *	2017-04-21
Contact Name *	Refer to Supplier Comment section		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

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
	AKQ7*U495JC3	A	BO2A	2017-04-21
Amount	UoM	Unit type	ST ECOPACK Grade	
154.00	mg	Each	ECOPACK® 1	
	Comment	ECOPACK® or ECOPACK® 1 is STMicroelectronics trade name for ROHS compliant devices		

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	
NAC	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	3.9x9.85x1.52	16	gull wing	
Comment	Package: Q7 SO 16 .15 TO JEDEC MS-012; MDF valid for ST232EBDR-ST232ECDR			

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	AKQ7*U495JC3				5000000.0	100005.0
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	Other inorganic materials	2.906	mg	supplier	die	Silicon (Si)	7440-21-3		2.804	mg	964900	18208
				supplier	metallization	Aluminium (Al)	7429-90-5		0.023	mg	7915	149
				supplier	Passivation	Silicon Nitride	12033-89-5		0.009	mg	3097	58
				supplier	Passivation	Silicon Oxide	7631-86-9		0.039	mg	13421	253
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.031	mg	10668	201
Leadframe	Copper & its alloys	32.334	mg	supplier	alloy	Copper (Cu)	7440-50-8		31.111	mg	962176	202019
				supplier	alloy	Iron (Fe)	7439-89-6		0.732	mg	22639	4753
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.044	mg	1361	286
				supplier	alloy	Zinc (Zn)	7440-66-6		0.038	mg	1175	247
				supplier	metallization	Nickel (Ni)	7440-02-0		0.375	mg	11598	2435
				supplier	metallization	Palladium (Pd)	7440-05-3		0.024	mg	742	156
				supplier	metallization	Gold (Au)	7440-57-5		0.010	mg	309	65
Die attach	Other Organic Materials	0.883	mg	supplier	glue	Silver (Ag)	7440-22-4		0.662	mg	749717	4299
				supplier	glue	Epoxy Cresol Novolak	29690-82-2		0.217	mg	245753	1409
				supplier	glue	1-isopropyl-2,2-dimethyltrimethylene diisobut	6846-50-0		0.004	mg	4530	26
Bonding wires	Precious metals	0.213	mg	supplier	wire	Gold (Au)	7440-57-5		0.213	mg	1000000	1383
Encapsulation	Other Organic Materials	117.665	mg	supplier	mold compound	Silica, vitreous	60676-86-0		94.132	mg	800000	611247
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		11.767	mg	100004	76409
				supplier	mold compound	phenol resin	9003-35-4		5.883	mg	49998	38201
				supplier	mold compound	Brominated epoxy resin	40039-93-8		2.353	mg	19997	15279
				supplier	mold compound	Antimony Trioxide	1309-64-4		2.353	mg	19997	15279
				supplier	mold compound	Carbon Black	1333-86-4		1.177	mg	10003	7643