



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 *	2015-11-19
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 *	Emilio Castelli	Representative Title	APG 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/online_tech_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
STA8090FG	COW5*V839BDQ	A	ZR1A	2015-11-19
Amount	UoM	Unit type	ST ECOPACK Grade	
63.02	mg	Each	ECOPACK® 2	

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	
Tin/Silver/Copper (SAC125)	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
BGA	5x5x1.2	99	flat	
Comment				

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-16th June 2014				
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	COWS*V839BDQ					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Dice	Other inorganic materials	3.580	mg	supplier	die	Silicon (Si)	7440-21-3		2.220	mg	620112	35225
Dice				supplier	metallization	Aluminium (Al)	7429-90-5		0.031	mg	8659	492
Dice				supplier	metallization	Copper (Cu)	7440-50-8		0.282	mg	78771	4475
Dice				supplier	metallization	Tantalum (Ta)	7440-25-7		0.467	mg	130447	7410
Dice				supplier	metallization	Cobalt (Co)	7440-48-4		0.003	mg	838	48
Dice				supplier	metallization	Titanium (Ti)	7440-32-6		0.022	mg	6145	349
Dice				supplier	metallization	Tungsten (W)	7440-33-7		0.228	mg	63687	3618
Dice				supplier	metallization	Nickel (Ni)	7440-02-0		0.001	mg	279	16
Dice				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.058	mg	16201	920
Dice				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.268	mg	74860	4252
Encapsulation (KE-G1250LKDS,Kyocer)	Other organic materials	27.620	mg	supplier	Molding Compound	Molding Compound	60676-86-0		23.752	mg	860019	376878
Encapsulation (KE-G1250LKDS,Kyocer)				supplier	Molding Compound	Epoxy resin	Trade Secret		2.651	mg	95988	42064
Encapsulation (KE-G1250LKDS,Kyocer)				supplier	Molding Compound	Phenol resin	Trade Secret		1.105	mg	40010	17533
Encapsulation (KE-G1250LKDS,Kyocer)				supplier	Molding Compound	Carbon black	133-86-4		0.110	mg	3983	1745
Substrate (HL832,MGC,AUS308,Taiyo)	Other organic materials	22.320	mg	supplier	Substrate	Continuous filament fiber glass	65997-17-3		2.668	mg	119545	42334
Substrate (HL832,MGC,AUS308,Taiyo)				supplier	Substrate	Epoxy	7328-97-4		2.224	mg	99651	35289
Substrate (HL832,MGC,AUS308,Taiyo)				supplier	Substrate	Flame Resistant Epoxy Resin	Trade Secret		1.557	mg	69764	24705
Substrate (HL832,MGC,AUS308,Taiyo)				supplier	Substrate	Heat Resistant Resin	Trade Secret		2.001	mg	89659	31750
Substrate (HL832,MGC,AUS308,Taiyo)				supplier	Substrate	Inorganic Filler	21645-51-2		5.559	mg	249081	88206
Substrate (HL832,MGC,AUS308,Taiyo)				supplier	Substrate	Copper (Cu)	7440-50-8		7.783	mg	348732	123495
Substrate (HL832,MGC,AUS308,Taiyo)				supplier	Substrate	Nickel (Ni)	7440-02-0		0.267	mg	11963	4237
Substrate (HL832,MGC,AUS308,Taiyo)				supplier	Substrate	Gold(Au)	7440-57-5		0.178	mg	7976	2824
Substrate (HL832,MGC,AUS308,Taiyo)				supplier	Substrate	Talc containing no asbestiform fiber	14807-96-6		0.008	mg	358	127
Substrate (HL832,MGC,AUS308,Taiyo)				supplier	Substrate	Morpholine derivative	Trade Secret		0.011	mg	493	175
Substrate (HL832,MGC,AUS308,Taiyo)				supplier	Substrate	Barium Sulfate	7727-43-7		0.036	mg	1613	571
Substrate (HL832,MGC,AUS308,Taiyo)				supplier	Substrate	Silica, amorphous	7631-86-9		0.004	mg	179	63
Substrate (HL832,MGC,AUS308,Taiyo)				supplier	Substrate	Dipropylene glycol monomethyl ether	34590-94-8		0.022	mg	986	349
Die Attach (ATB-125,Henkel)	Other organic materials	0.420	mg	supplier	Die attach Film	Modified epoxy resin	Trade Secret		0.242	mg	573460	3840
Die Attach (ATB-125,Henkel)				supplier	Die attach Film	Epoxy resin Dapson	80-08-0		0.114	mg	270142	1809
Die Attach (ATB-125,Henkel)				supplier	Die attach Film	Treated fumed silica	67762-90-7		0.014	mg	33175	222
Die Attach (ATB-125,Henkel)				supplier	Die attach Film	Substituted silane	Trade Secret		0.019	mg	45024	301
Die Attach (ATB-125,Henkel)				supplier	Die attach Film	Elastomeric polymer	Trade Secret		0.015	mg	35545	238
Die Attach (ATB-125,Henkel)				supplier	Die attach Film	Epoxy resin	Trade Secret		0.018	mg	42654	286
Bonding wire (FP2_Heraeus)	Other inorganic materials	0.960	mg	supplier	Bonding wire	Gold (Au)	7440-57-5		0.946	mg	989540	15010
Bonding wire (FP2_Heraeus)				supplier	Bonding wire	Palladium(Pd)	7440-05-3		0.010	mg	10460	159
Solder balls#B8.25Sn/1.2Ag/0.5Cu/0.0	Solder	8.130	mg	supplier	Solder ball	Tin (Sn)	7440-31-5		7.985	mg	982044	126700
Solder balls#B8.25Sn/1.2Ag/0.5Cu/0.0				supplier	Solder ball	Silver (Ag)	7440-22-4		0.098	mg	12053	1555
Solder balls#B8.25Sn/1.2Ag/0.5Cu/0.0				supplier	Solder ball	Copper (Cu)	7440-50-8		0.041	mg	5042	651
Solder balls#B8.25Sn/1.2Ag/0.5Cu/0.0				supplier	Solder ball	Nickel(Ni)	7440-02-0		0.004	mg	492	63
Solder balls#B8.25Sn/1.2Ag/0.5Cu/0.0				supplier	Solder ball	Lead(Pb)	7439-92-1		0.003	mg	369	48