




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 *	2015-12-22
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 *	Floriana San Biagio	Representative Title	AMS Materials Declaration 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/internet/com/support/online_tech_support.jsp		

Uncertainty Statement	
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Legal Statement	
Supplier Acceptance *	true
Legal Declaration *	Standard
Legal Statement	<p>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.</p>

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
	AU6R*R0745AW	A	ZS1A	2015-12-22
Amount	UoM	Unit type	ST ECOPACK Grade	
23.70	mg	Each	ECOPACK® 2	

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	
Not Applicable ; if coating is used o	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	3x3x0.86	8	gull wing	
Comment	Package: E3 MSOP/TSSOP 8 BODY3.00 PITCH0.65; MDF valid for TS48711ST			

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-17th December 2015				
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	AU6R*R0745AW					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Silicon die	Other inorganic materials	2.083	mg	supplier	die	Silicon (Si)	7440-21-3		2.04846287	mg	983551	86433
Silicon die				supplier	metallization	Aluminium (Al)	7429-90-5		0.007053242	mg	3387	298
Silicon die				supplier	metallization	Titanium (Ti)	7440-32-6		0.003022818	mg	1451	128
Silicon die				supplier	passivation	Silicon Nitride (SiN)	12033-89-5		0.00503803	mg	2419	213
Silicon die				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.019144513	mg	9192	808
Leadframe	Copper & its alloys	9.974		Supplier	Alloy	Copper (Cu)	7440-50-8		9.608530213	mg	963321	405423
Leadframe				Supplier	Alloy	Iron Phosphide (Fe2P)	1310-43-6		0.227	mg	22758	9578
Leadframe				Supplier	Alloy	Zinc (Zn)	7440-66-6		0.012494314	mg	1253	527
Leadframe	Nickel (Ni)			Supplier	Alloy	Nickel (Ni)	7440-02-0		0.114867077	mg	11516	4847
Leadframe	Precious metals			Supplier	Alloy	Palladium (Pd)	7440-05-3		0.009975299	mg	1000	421
Leadframe	Precious metals			Supplier	Alloy	Iron (Fe)	7439-89-6		0.001511409	mg	152	64
Die Attach	Other Organic Materials	0.625	mg	Supplier	Glue	Silver (Ag)	7440-22-4		0.502795362	mg	804969	21215
Die Attach				Supplier	Glue	Iron Phosphide (Fe2P)	1310-43-6		0.062471568	mg	100016	2636
Die Attach				Supplier	Glue	Bismaleimide resin	proprietary		0.01874147	mg	30005	791
Die Attach				Supplier	Glue	2-preponic acid, 2-methyl	68586-19-6		0.01874147	mg	30005	791
Die Attach				Supplier	Glue	Additive	proprietary		0.01874147	mg	30005	791
Die Attach				Supplier	Glue	Dicumyl peroxide	80-43-3		0.003123578	mg	5001	132
Bonding Wire	Precious metals	0.312	mg	Supplier	Bonding Wire	Gold (Au)	7440-57-5		0.31235784	mg	1000000	13180
Encapsulation	Other Organic Materials	10.706	mg	Supplier	Molding Compound	Epoxy Resin-1	Proprietary		0.327471929	mg	30588	13817
Encapsulation				Supplier	Molding Compound	Epoxy Resin-2	Proprietary		0.327471929	mg	30588	13817
Encapsulation				Supplier	Molding Compound	Phenol resin	Proprietary		0.491711697	mg	45929	20747
Encapsulation				Supplier	Molding Compound	Silica	60676-86-0		9.536990192	mg	890824	402405
Encapsulation				Supplier	Molding Compound	Carbon Black	1333-86-4		0.022167331	mg	2071	935