



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 *	2017-04-11
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 *	Antonella Lanzafame	Representative Title	AMG 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

While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.

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
TSZ122IYST	EBE3*V992ARY	A	ZY1A	2017-04-11
Amount	UoM	Unit type	ST ECOPACK Grade	
23.71	mg	Each	ECOPACK® 3	
Comment	ECOPACK® 3 is STMicroelectronics trade name for ROHS compliant device without use of any ROHS exemption and without Halogen nor Antimony			

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable ; if coating is used	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			

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- 12th January 2017				
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	EBE3*V992ARY						
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	0.797	mg	supplier	die	Silicon (Si)	7440-21-3		0.769	mg	964868	32434	
Die				supplier	metallization	Aluminium (Al)	7429-90-5		0.007	mg	8783	295	
Die				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	1255	42	
Die				supplier	metallization	Titanium Nitride (TiN)	25583-20-4		0.001	mg	1255	42	
Die				supplier	metallization	Tungsten (W)	7440-33-7		0.001	mg	1255	42	
Die				supplier	Passivation	Silicon Nitride (SiN)	68034-42-4		0.002	mg	2509	84	
Die				supplier	Passivation	Silicon Oxide(SiO2)	7631-86-9		0.016	mg	20075	675	
Leadframe	Copper & its alloys	9.584	mg	supplier	alloy	Copper (Cu)	7440-50-8		9.036	mg	942821	381224	
Leadframe				supplier	alloy	Nickel (Ni)	7440-02-0		0.282	mg	29424	11899	
Leadframe				supplier	alloy	Silicon (Si)	7440-21-3		0.061	mg	6365	2574	
Leadframe				supplier	alloy	Magnesium (Mg)	7439-95-4		0.014	mg	1461	591	
Leadframe	Nickel (Ni)			supplier	metallization	Nickel (Ni)	7440-02-0		0.185	mg	19303	7806	
Leadframe	Precious metals			supplier	metallization	Palladium (Pd)	7440-05-3		0.004	mg	417	169	
Leadframe	Precious metals			supplier	metallization	Gold (Au)	7440-57-5		0.002	mg	209	84	
Die attach	Other Organic Materials	0.336	mg	supplier	glue	Epoxy resin A	9003-36-5		0.023	mg	68452	970	
Die attach				supplier	glue	Epoxy resin B	68475-94-5		0.014	mg	41667	591	
Die attach				supplier	glue	Silver(Ag)	7440-22-4		0.257	mg	764881	10844	
Die attach				supplier	glue	Lactone	96-48-0		0.014	mg	41667	591	
Die attach				supplier	glue	Polyoxypropylenediamine	9046-10-0		0.014	mg	41667	591	
Die attach				supplier	glue	2,6-Diglycidyl phenyl allyl ether oligomer	proprietary		0.014	mg	41667	591	
Bonding wire	Precious metals	0.07	mg	supplier	wire	Gold (Au)	7440-57-5		0.07	mg	1000000	2954	
encapsulation	Other Organic Materials	12.923	mg	supplier	mold compound	Epoxy Resin	proprietary		1.163	mg	89995	49072	
encapsulation				supplier	mold compound	Silica fused (SiO2)	60676-86-0		10.855	mg	839975	457975	
encapsulation				supplier	mold compound	Phenol Resin	proprietary		0.841	mg	65078	35485	
encapsulation				supplier	mold compound	Carbon Black	1333-86-4		0.064	mg	4952	2700	