



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 *	2017-04-28
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/web/en/support/support.html		

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
TS4191ST	EYE3*A419AR6	A	ZS1A	2017-04-28
Amount		UoM	Unit type	ST ECOPACK Grade
23.71		mg	Each	ECOPACK® 3

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 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			

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	EYE3*A419AR6					
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	1.380	mg	supplier	die	Silicon (Si)	7440-21-3		1.357	mg	983333	57233
Silicon die				supplier	metallization	Aluminium (Al)	7429-90-5		0.005	mg	3623	211
Silicon die				supplier	metallization	Titanium (Ti)	7440-32-6		0.002	mg	1449	84
Silicon die				supplier	metallization	Titanium Nitride (TiN)	25583-20-4		0.001	mg	725	42
Silicon die				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.003	mg	2174	127
Silicon die				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.012	mg	8696	506
Leadframe	Copper & its alloys	10.302		Supplier	Alloy	Copper (Cu)	7440-50-8		9.926	mg	963502	418642
Leadframe				Supplier	Alloy	Iron (Fe)	7439-89-6		0.232	mg	22520	9785
Leadframe				Supplier	Alloy	Phosphorus (P)	7723-14-0		0.002	mg	194	84
Leadframe	Nickel (Ni)			Supplier	Alloy	Zinc (Zn)	7440-66-6		0.013	mg	1262	548
Leadframe	Precious metals			Supplier	Alloy	Nickel (Ni)	7440-02-0		0.119	mg	11551	5019
Leadframe	Precious metals			Supplier	Alloy	Palladium (Pd)	7440-05-3		0.01	mg	971	422
Die Attach	Other Organic Materials	0.646	mg	Supplier	Glue	Gold (Au)	7440-57-5		0.002	mg	3096	84
Die Attach				Supplier	Glue	Silver (Ag)	7440-22-4		0.519	mg	803406	21889
Die Attach				Supplier	Glue	Carbocyclic Acrylates	proprietary		0.065	mg	100619	2741
Die Attach				Supplier	Glue	Bismaleimide resin	35325-39-4		0.019	mg	29412	801
Die Attach				Supplier	Glue	2-preponoic acid, 2-methyl	68586-19-6		0.019	mg	29412	801
Die Attach				Supplier	Glue	Additive	proprietary		0.019	mg	29412	801
Die Attach			mg	Supplier	Glue	Dicumyl peroxide	80-43-3		0.003	mg	4644	127
Bonding Wire	Precious metals	0.323	mg	Supplier	Bonding Wire	Gold (Au)	7440-57-5		0.323	mg	1000000	13623
Encapsulation	Other Organic Materials	11.059	mg	Supplier	Molding Compound	Epoxy Resin-1 (0.5-6%)	Proprietary		0.338	mg	30563	14256
Encapsulation				Supplier	Molding Compound	Epoxy Resin-2 (1-5%)	Proprietary		0.338	mg	1046440	14256
Encapsulation				Supplier	Molding Compound	Phenol resin (3-6%)	29690-82-2		0.508	mg	1572755	21426
Encapsulation				Supplier	Molding Compound	Silica (82-94%)	60676-86-0		9.852	mg	30501548	415521
Encapsulation				Supplier	Molding Compound	Carbon Black (0.2%)	1333-86-4		0.023	mg	71207	970