



## Materials Declaration Form

<b>IPC Form Type *</b>	1752 Distribute	<b>Version</b>	2
<b>Sectionals *</b>	Material Info Manufacturing Info	<b>Subsectionals *</b>	A-D
<i>* : Required Field</i>			

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2017-05-11
<b>Contact Name *</b>	Refer to "Supplier Comment" section	<b>Contact Title</b>	Refer to "Supplier Comment" section
<b>Contact Phone *</b>	Refer to "Supplier Comment" section	<b>Contact Email *</b>	Refer to "Supplier Comment" section
<b>Authorized Representative *</b>	Antonella Lanzafame	<b>Representative Title</b>	AMG Materials Declaration Champion
<b>Representative Phone *</b>	Refer to "Supplier Comment" section	<b>Representative Email *</b>	Refer to "Supplier Comment" section
<b>Supplier Comment</b>	Online Technical Support - STMicroelectronics : <a href="http://www.st.com/web/en/support/online_tech_support.html">http://www.st.com/web/en/support/online_tech_support.html</a>		

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**Legal Statement**

<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>	Standard
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**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
STGAP1ASTR	9B9U*MV0RBDA	A	ZY1A	2017-05-11
Amount		UoM	Unit type	ST ECOPACK Grade
550.00		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		
NAC	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape
SOJ	7.50 X 15.40 X 2.5	24	gull wing
Comment	SO 24 .30 TO JEDEC MS-013AD		

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	989U*MV0RBDA					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
die (s)	Other inorganic materials	7.704	mg	supplier	die	Silicon (Si)	7440-21-3		7.492	mg	972482	13622
die (s)				supplier	metallization	Aluminium (Al)	7429-90-5		0.04	mg	5192	73
die (s)				supplier	metallization	Tungsten (W)	7440-33-7		0.032	mg	4154	58
die (s)				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.008	mg	1038	15
die (s)				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.068	mg	8827	124
die (s)				supplier	passivation	Gamma-butyrolactone	96-48-0		0.01	mg	1298	18
die (s)				supplier	passivation	Polyhydroxyamide	55295-98-2		0.004	mg	519	7
die (s)				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.004	mg	519	7
die (s)				supplier	back side metallization	Gold (Au)	7440-57-5		0.011	mg	1428	20
die (s)				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.033	mg	4283	60
die (s)				supplier	back side metallization	Vanadium (V)	7440-62-2		0.002	mg	260	4
Leadframe	Copper & its alloys	182.133	mg	supplier	alloy	Copper (Cu)	7440-50-8		175.607	mg	964169	319285
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		4.13	mg	22676	7509
Leadframe				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.249	mg	1367	453
Leadframe				supplier	alloy	Zinc (Zn)	7440-66-6		0.216	mg	1186	393
Leadframe				supplier	metallization	Silver (Ag)	7440-22-4		1.931	mg	10602	3511
Die attach	Other inorganic materials	1.329	mg	supplier	glue or tape	Silver (Ag)	7440-22-4		1.063	mg	799850	1933
Die attach				supplier	glue or tape	Bisphenol F type epoxy resin	9003-36-5		0.106	mg	79759	193
Die attach				supplier	glue or tape	Epoxy resin	68475-94-5		0.04	mg	30098	73
Die attach				supplier	glue or tape	2,6-Diglycidyl phenyl allyl ether	EC 417-470-1		0.04	mg	30098	73
Die attach				supplier	glue or tape	Gamma Butyrolactone	96-48-0		0.04	mg	30098	73
Die attach				supplier	glue or tape	Polyoxypropylenediamine	9046-10-0		0.04	mg	30098	73
Die attach 2	Other inorganic materials	0.303	mg	supplier	glue or tape	bismaleimide	35325-39-4		0.003	mg	9901	5
Die attach 2				supplier	glue or tape	poly(4,4'-oxydiphenylene-pyromellitimide)	25036-53-7		0.297	mg	980198	540
Die attach 2				supplier	glue or tape	Zinc hydroxide	20427-58-1		0.003	mg	9901	5
Bonding wire	Precious metals	2.123	mg	supplier	wire	Gold (Au)	7440-57-5		2.123	mg	1000000	3860
encapsulation	Other Organic Materials	352.121	mg	supplier	mold compound	Biphenyl epoxy resin	85954-11-6		28.17	mg	80001	51218
encapsulation				supplier	mold compound	Phenol Resin	26834-02-6		14.085	mg	40000	25609
encapsulation				supplier	mold compound	Silica, vitreous	60676-86-0		305.993	mg	869000	556351
encapsulation				supplier	mold compound	Carbon black	1333-86-4		1.761	mg	5001	3202
encapsulation				supplier	mold compound	Bismuth (Bi)	7440-69-9		2.112	mg	5998	3840
connections coating	Solder	4.287	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		4.287	mg	1000000	7795