



## 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

*\* : Required Field*

<b>Supplier Information</b>			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2019-12-09
<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>	AMS 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/support.html">http://www.st.com/web/en/support/support.html</a>		

**Uncertainty Statement**


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<b>Legal Statement</b>		
<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>
		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
A7986ATR	KM61*UA50BBA	A	ZY1A	2019-12-09
	Amount	UoM	Unit type	ST ECOPACK Grade
	79.52	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	
Not Applicable ; if coating is used	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	4.85X3.9X1.52	8	gull wing	
Comment	Package: HSOP 8L .150" PITCH 1.27 EXPOPAD.			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-March 2015	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	<b>true</b>
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 July 2019				
Query				Response
The product does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				<b>true</b>
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product













Material Composition Declaration						Mfr Item Name	KM61*UA50BBA					
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	2.095	mg	supplier	die	Silicon (Si)	7440-21-3		1.973	mg	941766	24811
Silicon die				supplier	metallization	Aluminium (Al)	7429-90-5		0.02	mg	9547	252
Silicon die				supplier	metallization	Titanium Nitride (TiN)	25583-20-4		0.012	mg	5728	151
Silicon die				supplier	metallization	Tungsten (W)	7440-33-7		0.016	mg	7637	201
Silicon die				supplier	Passivation	Silicon Nitride	12033-89-5		0.004	mg	1909	50
Silicon die				supplier	Passivation	Silicon Oxide	7631-86-9		0.035	mg	16706	440
Silicon die				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.002	mg	955	25
Silicon die				supplier	back side metallization	Gold (Au)	7440-57-5		0.004	mg	1909	50
Silicon die				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.008	mg	3819	101
Silicon die				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.021	mg	10024	264
Leadframe	Copper & its alloys	32.582	mg	supplier	alloy	Copper (Cu)	7440-50-8		31.197	mg	957492	392316
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		0.769	mg	23602	9671
Leadframe				supplier	alloy	Zinc (Zn)	7440-66-6		0.043	mg	1320	541
Leadframe				supplier	alloy	Iron Phosphide(FeP)	26508-33-8		0.013	mg	399	163
Leadframe				supplier	metallization	Silver (Ag)	7440-22-4		0.56	mg	17187	7042
Die attach	Other inorganic materials	0.646	mg	supplier	glue	Silver (Ag)	7440-22-4		0.518	mg	801858	6514
Die attach				supplier	glue	Bisphenol F type epoxy resin	9003-36-5		0.052	mg	80495	654
Die attach				supplier	glue	Epoxy resin	68475-94-5		0.019	mg	29412	239
Die attach				supplier	glue	2,6-Diglycidyl phenyl allyl ether	EC 417-470-1		0.019	mg	29412	239
Die attach				supplier	glue	Gamma Butyrolactone	96-48-0		0.019	mg	29412	239
Die attach				supplier	glue	Polyoxypropylenediamine	9046-10-0		0.019	mg	29412	239
Bonding wires	Precious metals	0.22	mg	supplier	wire	Gold (Au)	7440-57-5		0.22	mg	1000000	2767
Encapsulation	Other Organic Materials	41.99	mg	supplier	mold compound	Multi-aromatic Resin	Proprietary		3.149	mg	74994	39600
Encapsulation				supplier	mold compound	Carbon Black	1333-86-4		0.21	mg	5001	2641
Encapsulation				supplier	mold compound	Silica Fused	60676-86-0		36.112	mg	860014	454125
Encapsulation				supplier	mold compound	Epoxy Cresol Novolac	25068-38-6		0.84	mg	20005	10563
Encapsulation				supplier	mold compound	Phenol Resin	29690-82-2		1.679	mg	39986	21114
connections coating	Solder	1.987	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		1.987	mg	1000000	24987