



## 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>	2020-02-10
<b>Company Unique ID</b>	NL 008751171B01		
<b>Contact Name *</b>	Refer to Supplier Comment section		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>	Floriana SAN BIAGIO	<b>Representative Title</b>	AMS MD 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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Legal Statement	
<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
0	KR61*UA50BBA	A	9998-ZY1A	2020-02-10
	Amount	UoM	Unit type	ST ECOPACK Grade
	79.5	mg	Each	ECOPACK® 2
Comment	ECOPACK® 2 is STMicroelectronics trade name for ROHS compliant device without Brominated and Chlorinated compound (900ppm) and without Antimony oxide flame retardant ( in each organic material)			

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	Tin (Sn), matte, annealed	Copper Alloy	0	

Package Designator	Size	Nbr of instances	Shape	
DSO	4.9 x 3.9	8	gull wing	
Comment	61 HSOP 8L .150" PITCH 1.27 EXPOPAD; MDF is valid for A7986ATR			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-March 2015	
Query	Response
1 - Product(s) meets EU RoHS requirement without any exemptions	TRUE
2 - 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
3 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	FALSE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption Id.	Description

QueryList : ELV directive : 2000/53/EC amended 2017/2096 _November 2017	
Query	Response
1 - Product(s) meets EU ELV requirements without any exemptions	TRUE
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	FALSE
Exemption Id.	Description

QueryList : California Prop65 list, dated 3rd January 2020			
Query			Response
1 - The product does not contain identified substance from California Prop 65 List, no exposure to consumers is foreseen			FALSE
2 - The product is containing below substance(s) from California Prop 65 List, no exposure to consumers is foreseen			TRUE
Substance	amount in product (mg)	Application	ppm in product
Nickel	0.01	Leadframe	176

QueryList : REACH-16th January 2020				
Query				Response
1 - Product(s) 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
2 - Product(s) does not contain REACH Substances Of Very High Concern in any Embedded article nor Homogeneous Material above the limits per the definition within REACH				TRUE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material

QueryList : Korea Chemical Control Act_ 27 Dec 2017 update				
Query				Response
The Product does contain at least one of the substances listed in Chemical Control Act				NO
Substance	Homogeneous Material impacted	Content in Homogeneous Material (mg)	Concentration in the material(%)	Application Purpose

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	KR61*UA50BBA				5999999.0	9999999.0
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	M-011 Other inorganic materials	2.092	mg	supplier	die	Silicon(Si)	7440-21-3		1.976	mg	944551	24849
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.020	mg	9560	252
				supplier	metallisation	Chromium(Cr)	7440-47-3		0.002	mg	956	25
				supplier	metallisation	Gold(Au)	7440-57-5		0.004	mg	1912	50
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.014	mg	6692	176
				supplier	metallisation	Tungsten(W)	7440-33-7		0.016	mg	7648	201
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.004	mg	1912	50
				supplier	passivation	Silicon oxide	7631-86-9		0.035	mg	16730	440
Leadframe	M-004 Copper and its alloys	32.610	mg	supplier	polymer coating	polyimide	proprietary		0.021	mg	10038	264
				supplier	alloy & coating	Copper(Cu)	7440-50-8		31.257	mg	958510	393071
				supplier	alloy & coating	Iron(Fe)	7439-89-6		0.754	mg	23122	9482
				supplier	alloy & coating	Zinc(Zn)	7440-66-6		0.038	mg	1165	478
				supplier	alloy & coating	Silver (Ag)	7440-22-4		0.561	mg	17203	7055
Die attach	M-015 Other organic materials	0.660	mg	supplier	glue	Epoxy resin A	9003-36-5		0.046	mg	69697	578
				supplier	glue	Epoxy resin B	68475-94-5		0.026	mg	39394	327
				supplier	glue	Silver(Ag)	7440-22-4		0.510	mg	772727	6413
				supplier	glue	Lactone	Proprietary		0.026	mg	39394	327
				supplier	glue	Polyoxypropylenediamine	9046-10-0		0.026	mg	39394	327
Bonding wires	M-008 Precious metals	0.264	mg	supplier	glue	2,6-Diglycidyl phenyl allyl ether oligomer	Proprietary		0.026	mg	39394	327
				supplier	wire	Gold (Au)	7440-57-5		0.264	mg	1000000	3320
Encapsulation	M-011 Other inorganic materials	42.520	mg	supplier	mold compound	Epoxy Resin	Proprietary		3.189	mg	75000	40103
				supplier	mold compound	Silica fused (SiO2)	60676-86-0		36.568	mg	860019	459859
				supplier	mold compound	Phenol Resin	Proprietary		1.700	mg	39981	21378
				supplier	mold compound	Carbon Black	1333-86-4		0.213	mg	5009	2679
				supplier	mold compound	Epoxy, Cresol Novolac	29690-82-2		0.850	mg	19991	10689
connections coating	Solder	1.374	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		1.374	mg	1000000	17279