



## 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

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2021-10-07
<b>Company Unique ID</b>	NL 008751171B01		
<b>Contact Name *</b>	Refer to Supplier Comment section	<b>Contact Email *</b>	Refer to Supplier Comment section
<b>Contact Phone *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Authorized Representative *</b>	Antonella Lanzafame	<b>Representative Title</b>	AMS Material 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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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
ULN2803A	HLC7*L613AB6	A	MU1A	2021-10-07
	Amount	UoM	Unit type	ST ECOPACK Grade
	1100	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
Not Applicable	Not Applicable	,		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), immersion	Copper Alloy	,	

Package Designator	Package Size	Nbr of instances	Shape	
DIP	6.35 x 22.86	18	Pin	
Comment	C7 PDIP 18 .3 Cu .25			

QueryList : RoHS Directive 2011/65/EU- 8 June 2011 – Annex II amended by Delegated Directive 2015/863 - 31 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 2020/363_March 2020	
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 19th March 2021			
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	0.020	alloy	18

QueryList : Chinese RoHS , references : SJT 11364 – 2014 and GBT 26572 – 2014				
Query				Response
1 - Product(s) requires marking for the presence of restricted substances and must be marked with an Environmental Protection Use Period under China's Measures for Administration of the control of pollution by Electronic Information Products				false
2 - Product(s) is eligible for marking with the e code under China's Measures for Administration of the control of pollution by Electronic information Products				false
Hazardous substance				
Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Hexavalent Chromium (Cr VI)	PBB & PBDE
O	O	O	O	O

QueryList : REACH-8th July 2021				
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
	0			
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
	0			

QueryList : Responsible metals sourcing	
Query	Response
The component is containing at least one of the following metals : Cobalt , Gold , Tantalum , Tin , Tungsten.	true
The following metals are present in the component :	Gold, Tin,
This product is in the scope of the responsible metals sourcing, its compliance is covered by our company processes .	

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	false

China GB 33372-2020 Limit standard for volatile organic compounds content in adhesives - 4 March 2020 application date 1st December 2020	
Query	Response
The product contains adhesives identified under GB 33372	true
All the adhesive impacted complies with GB 33372	true

Stockholm Convention Persistent Organic Pollutants	
Query	Response
Product is compliant with Stockholm Convention Persistent Organic Pollutants Annex I	true

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	HLC7*L613A86		1100.0000		5999999.0	999999.0
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	2.937	mg	supplier	die	Silicon(Si)	7440-21-3		2.844	mg	968335	2585
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.036	mg	12257	33
				supplier	metallisation	Chromium(Cr)	7440-47-3		0.002	mg	681	2
				supplier	metallisation	Gold(Au)	7440-57-5		0.006	mg	2043	5
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.020	mg	6810	18
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.012	mg	4086	11
Leadframe	M-004 Copper and its alloys	623.208	mg	supplier	passivation	Silicon oxide	7631-86-9		0.017	mg	5788	15
				supplier	alloy	Copper(Cu)	7440-50-8		607.316	mg	974500	552105
				supplier	alloy	Iron(Fe)	7439-89-6		14.284	mg	22920	12985
				supplier	alloy	Iron phosphide	1310-43-6		0.860	mg	1380	782
Die attach	M-011 Other inorganic materials	0.441	mg	supplier	alloy	Zinc(Zn)	7440-66-6		0.748	mg	1200	680
				supplier	glue	Silver(Ag)	7440-22-4	0	0.336	mg	761905	305
				supplier	glue	Oxiranylmethoxy-phenyl-methylene-bisoxirane	13561-08-5		0.053	mg	120181	48
				supplier	glue	Phenol resin	9003-35-4		0.013	mg	29478	12
				supplier	glue	Epoxypropoxy butane polymer	2425-79-8		0.013	mg	29478	12
Bonding wires	M-008 Precious metals	0.309	mg	supplier	glue	Diglycidyl phenyl allyl ether	EC417-470-1		0.022	mg	49887	20
				supplier	glue	Polyoxypropylenediamine	9046-10-6		0.004	mg	9070	4
				supplier	wire	Gold(Au)	7440-57-5		0.309	mg	1000000	281
				supplier	mold compound	Silica vitreous	60676-86-0		397.476	mg	865000	361342
Encapsulation	M-011 Other inorganic materials	459.510	mg	supplier	mold compound	Epoxy type resin	proprietary		45.951	mg	100000	41774
				supplier	mold compound	Phenol resin	proprietary		13.785	mg	29999	12532
				supplier	mold compound	Carbon black	1333-86-4		2.298	mg	5001	2089
Connections coating	Solder	13.595	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		13.595	mg	1000000	12359