



## 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>	2019-09-20
<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>	Rossana Bonaccorso	<b>Representative Title</b>	ADG 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**


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		
<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
BAR43SFILM	HJWU*NHBAT43	A	Z55A	2019-09-20
	Amount	UoM	Unit type	ST ECOPACK Grade
	10	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
1	260	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte	Alloy 42		

Package Designator	Size	Nbr of instances	Shape	
SIP	2.913X1.313X1.054	2	Through-hole	
Comment	Package: SOT 23 DIODES SERIE			

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 28th June 2019			
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	1.13	Die - Leadframe	112500
Cobalt	0.01	Leadframe	1300

QueryList : REACH-16th July 2019				
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

Material Composition Declaration :						Mfr Item Name	HWU*NHBAT43					
note : Substance present with less 0.001mg will not be declared in this document												
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	0.094	mg	supplier	die	Silicon (Si)	7440-21-3		0.088	mg	936170	8800
				supplier	metallization	Aluminium (Al)	7429-90-5		0.004	mg	42554	400
				supplier	metallization	Nickel (Ni)	7440-02-0		0.001	mg	10638	100
				supplier	Passivation	Silicon Oxide	7631-86-9		0.001	mg	10638	100
				supplier	alloy	Manganese (Mn)	7439-96-5		0.015	mg	5355	1500
Leadframe	M-004 Copper and its alloys	2.801	mg	supplier	alloy	Iron (Fe)	7439-89-6		1.642	mg	586219	164200
				supplier	alloy	Chromium (Cr)	7440-47-3		0.003	mg	1071	300
				supplier	alloy	Cobalt (Co)	7440-48-4		0.013	mg	4642	1300
				supplier	alloy	Silicium (Si)	7440-21-3		0.004	mg	1428	400
				supplier	metallization	Nickel (Ni)	7440-02-0		1.124	mg	401285	112400
Bonding wire	M-011 Other inorganic materials	0.047	mg	supplier	wire	Gold (Au)	7440-57-5		0.047	mg	1000000	4700
Encapsulation	M-015 Other organic materials	6.797	mg	supplier	mold compound	Silica, vitreous	60676-86-0		6.009	mg	884066	600900
				supplier	mold compound	Epoxy Resin	29690-82-2		0.297	mg	43696	29700
				supplier	mold compound	Phenol Resin	26834-02-6		0.297	mg	43696	29700
				supplier	mold compound	Aromatic poly-phosphate	Proprietary		0.182	mg	26777	18200
				supplier	mold compound	Carbon Black	1333-86-4		0.012	mg	1765	1200
Connection coating	M-011 Other inorganic materials	0.261	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.261	mg	1000000	26100