



## 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>	2020-09-08
<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>	Antonella Lanzafame	<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
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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
TSC888BILT	BYWY*101BAR6	B	ZS1A	2020-09-08
	Amount	UoM	Unit type	ST ECOPACK Grade
	16.38	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	
Tin/Lead(Sn5Pb95)	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Package Size	Nbr of instances	Shape	
SOT	2.80.91.5	5	0	
Comment	WY SOT 23-5			

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	false
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)	true
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Exemption Id.	Description
15a	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages

QueryList : ELV directive : 2000/53/EC amended 2020/363_March 2020	
Query	Response
1 - Product(s) meets EU ELV requirements without any exemptions	false
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	true
Exemption Id.	Description
8g	8g - Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages

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
Lead	0.09	solder	5435

QueryList : REACH-25th June 2020				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				false
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Lead	1000 ppm	0.09	Die or dies	5435
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				false
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material
Lead	1000 ppm	0.089	Die or dies	51624

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
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	BYWY*101BAR6		16.4		4000001.0	1000000.0
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die or dies	M-011 Other inorganic materials	1.724	mg	supplier	die	Silicon(Si)	7440-21-3		1.563	mg	906613	95450
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.016	mg	9281	977
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.002	mg	1160	122
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.005	mg	2900	305
				supplier	passivation	Silicon oxide	7631-86-9		0.027	mg	15661	1649
				supplier	polymer coating	polyimide	proprietary		0.017	mg	9861	1038
				supplier	UBM	Titanium (Ti)	7440-32-6		0.005	mg	2900	305
				SVHC	bump	Lead (Pb)	7439-92-1	15a-Lead in solders to complete	0.089	mg	51624	5435
Leadframe	M-004 Copper and its alloys	6.905	mg	supplier	alloy	Copper (Cu)	7440-50-8		6.670	mg	965967	407328
				supplier	alloy	Iron (Fe)	7439-89-6		0.156	mg	22592	9527
				supplier	alloy	Phosphorus (P)	12185-10-3		0.002	mg	290	122
				supplier	alloy	Zinc (Zn)	7440-66-6		0.008	mg	1159	489
				supplier	alloy	Silver (Ag)	7440-22-4		0.069	mg	9993	4214
				supplier	alloy							
Encapsulation	M-011 Other inorganic materials	7.075	mg	supplier	mold compound	Epoxy Resin A	Proprietary		0.227	mg	32085	13863
				supplier	mold compound	Epoxy Resin B	Proprietary		0.227	mg	32085	13863
				supplier	mold compound	Phenol Resin	26834-02-6		0.324	mg	45795	19786
				supplier	mold compound	Silica, vitreous	60676-86-0		6.282	mg	887915	383634
				supplier	mold compound	Carbon Black	1333-86-4		0.015	mg	2120	916
connections coating	Solder	0.671	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.671	mg	1000000	40977