



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D * : Required Field

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2019-03-20
Company Unique ID	NL 008751171801		
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Authorized Representative *	Rossana Bonaccorso	Representative Title	ADG MD Champion
Representative Phone *	Refer to Supplier Comment section	Representative Email *	Refer to Supplier Comment section
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/web/en/support/support.html		

Uncertainty Statement


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Legal Statement		
Supplier Acceptance *	true	Legal Declaration *
		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
	H2RH*TWB221G	A	9941	2019-03-20
Amount	UoM	Unit type	ST ECOPACK Grade	
400.00	mg	Each	ECOPACK2	
	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
NA	NA	NA		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
RAD	6.5-10.17-3.24	2	Through hole	
Comment	Package: DO 15 - MDF valid for CPs: BZW06-376B - BZW06-376BRL - P6KE440CA - P6KE440CARL			

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
7a	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)

QueryList : ELV directive : 2000/53/EC amended 2017/2096 _November 2017	
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
8e	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)

QueryList : California Prop65 list, dated 23rd November 2018			
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	0.02	Die	48
Lead	1.66	Soft solder	4145

QueryList : REACH-15th January 2019				
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	1.66	Soft solder	4145
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	1.66	Soft solder	924707

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	H2RH*TWB221G					
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	1.844	mg	supplier	die	Silicon (Si)	7440-21-3		1.789	mg	970174	4473
				supplier	metallization	Aluminium (Al)	7429-90-5		0.010	mg	5423	25
				supplier	metallization	Gold (Au)	7440-57-5		0.007	mg	3796	18
				supplier	metallization	Nickel (Ni)	7440-02-0		0.008	mg	4338	20
				supplier	Passivation	Silicon Oxide	7631-86-9		0.010	mg	5423	25
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.007	mg	3796	18
				supplier	back side metallization	Gold (Au)	7440-57-5		0.002	mg	1085	5
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.011	mg	5965	28
Leadframe	M-004 Copper and its alloys	286.216	mg	supplier	alloy	Copper (Cu)	7440-50-8		285.844	mg	998700	714610
				supplier	alloy	Iron (Fe)	7439-89-6		0.286	mg	1000	715
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.086	mg	300	215
Soft solder	Solder	1.793	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	1.658	mg	924707	4145
				supplier	solder	Tin (Sn)	7440-31-5		0.045	mg	25098	113
				supplier	solder	Silver (Ag)	7440-22-4		0.090	mg	50195	225
Encapsulation	M-011 Other inorganic materials	103.471	mg	supplier	mold compound	Quartz	14808-60-7		80.708	mg	780006	201770
				supplier	mold compound	epoxy resin	29690-82-2		15.003	mg	144997	37504
				supplier	mold compound	phenol resin	9003-35-4		7.243	mg	70000	18108
				supplier	mold compound	Carbon Black	1333-86-4		0.517	mg	4997	1293
Connections coating	Solder	6.676	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.676	mg	1000000	16690