



Materials Declaration Form

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

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2018-11-16
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Floriana SAN BIAGIO	Representative Title	AMG 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

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			
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
	WBO7*VA46BCJ	A	ZY1A	2018-11-16
Amount	UoM	Unit type	ST ECOPACK Grade	
80.00	mg	Each	ECOPACK® 3	
	Comment	ECOPACK® 3 is STMicroelectronics trade name for ROHS compliant device without use of any ROHS exemption and without Halogen nor Antimony		

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
3	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
tin is used or other bulk terminat	Tin (Sn), matte	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
DSO	0.15 x 0.194 x 0.058	8	gull wing	
Comment	07 SO 08 .15 JEDEC; MDF valid for TSZ182IDT			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 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 : REACH-27th June 2018				
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

Material Composition Declaration						Mfr Item Name	WBO7*VA46CJ					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	Other inorganic materials	0.623	mg	supplier	die	Silicon (Si)	7440-21-3		0.596	mg	956661	7450
				supplier	metallization	Aluminium (Al)	7429-90-5		0.005	mg	8026	63
				supplier	metallization	Tungsten (W)	7440-33-7		0.001	mg	1605	13
				supplier	Passivation	Silicon Nitride	12033-89-5		0.002	mg	3210	25
				supplier	Passivation	Silicon Oxide	7631-86-9		0.010	mg	16051	125
				supplier	polymer die coating	PIXI Gamma-butylolactone	96-48-0		0.008	mg	12841	100
Leadframe	Copper & its alloys	24.120	mg	supplier	alloy	Copper (Cu)	7440-50-8		23.461	mg	972678	293263
				supplier	alloy	Iron (Fe)	7439-89-6		0.578	mg	23964	7225
				supplier	alloy	Zinc (Zn)	7440-66-6		0.029	mg	1202	363
				supplier	alloy	Metallic Phosphorous (P)	7723-14-0		0.007	mg	290	88
				supplier	metallization	Silver(Ag)	7440-22-4		0.045	mg	1866	563
Die attach	Other Organic Materials	0.675	mg	supplier	glue	Silver(Ag)	7440-22-4		0.514	mg	761481	6425
				supplier	glue	Reaction product: bisphenol-F-(epichlorhydrin)	9003-36-5		0.047	mg	69630	588
				supplier	glue	Fatty acids, C18-unsatd., dimers, polymers with	68475-94-5		0.027	mg	40000	338
				supplier	glue	gamma. Butyrolactone	96-48-0		0.027	mg	40000	338
				supplier	glue	Polyoxyalkylene amine	9046-10-0		0.027	mg	40000	338
				supplier	glue	Epoxy Resin	Proprietary		0.027	mg	40000	338
				supplier	glue	Epoxy Resin Modifier	Proprietary		0.003	mg	4444	38
				supplier	glue	Substituted Silane	Proprietary		0.003	mg	4444	38
Bonding wires	Precious metals	0.158	mg	supplier	wire	Gold (Au)	7440-57-5		0.156	mg	987342	1950
				supplier	wire	Palladium (Pd)	7440-05-3		0.002	mg	12658	25
Encapsulation	Other Organic Materials	53.050	mg	supplier	mold compound	Epoxy Resin A	Proprietary		4.244	mg	80000	53050
				supplier	mold compound	Epoxy Resin B	29690-82-2		1.326	mg	24995	16575
				supplier	mold compound	Silica Amorphous	60676-86-0		45.093	mg	850009	563663
				supplier	mold compound	Carbon Black	1333-86-4		2.122	mg	40000	26525
				supplier	mold compound	Phenol Resin	205830-20-2		0.265	mg	4995	3313
Finishing	Other inorganic materials	1.373	mg	supplier	connection coating	Tin (Sn)	7440-31-5		1.373	mg	1000000	17163