



Materials Declaration Form

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

*: Required Field

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2018-06-08
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
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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
STP5NK50Z	TLDZ*EZ52B61	A	64BA	2018-06-08
Amount	UoM	Unit type	ST ECOPACK Grade	
1925.00	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	
SIP	10-9.1-4.5	3	THROUGH HOLE	
Comment	TO 220 AB NON ISOL			

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			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 2016/774 _May 2016			
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 25th May 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	0.53	Die - Leadframe	274
Lead	5.13	Soft solder	2666

QueryList : REACH-15th January 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
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 : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	TLD2*EZ52B61					
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	5.664	mg	supplier	die	Silicon (Si)	7440-21-3		5.536	mg	977401	2876
				supplier	metallization	Aluminium (Al)	7429-90-5		0.037	mg	6532	19
				supplier	Passivation	Silicon Nitride	12033-89-5		0.014	mg	2472	7
				supplier	Passivation	Silicon Oxide	7631-86-9		0.023	mg	4061	12
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.003	mg	530	2
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.038	mg	6709	20
Leadframe	M-004 Copper and its alloys	1253.535	mg	supplier	back side metallization	Silver (Ag)	7440-22-4		0.013	mg	2295	7
				supplier	alloy	Copper (Cu)	7440-50-8		1251.376	mg	998278	650065
				supplier	alloy	Iron (Fe)	7439-89-6		1.253	mg	1000	649
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.376	mg	300	195
				supplier	metallization	Nickel (Ni)	7440-02-0		0.490	mg	390	255
Soft solder	Solder	5.374	mg	JIG - R	metallization	Phosphorus (P)	7723-14-0		0.040	mg	32	21
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	5.132	mg	954968	2666
				supplier	solder	Silver (Ag)	7440-22-4		0.134	mg	24935	70
				supplier	solder	Tin (Sn)	7440-31-5		0.108	mg	20097	56
Bonding wires	M-011 Other inorganic materials	0.435	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.434	mg	997701	225
				supplier	wire	Magnesium (Mg)	7439-95-4		0.001	mg	2299	1
				supplier	mold compound	Silica, vitreous	60676-86-0		568.658	mg	870000	295407
				supplier	mold compound	Epoxy resin	25068-38-6		65.363	mg	100000	33955
Encapsulation	M-011 Other inorganic materials	653.630	mg	supplier	mold compound	Phenol resin	29690-82-2		16.341	mg	25000	8489
				supplier	mold compound	Carbon Black	1333-86-4		3.268	mg	5000	1698
				supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3305