



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 *	2018-06-21
Company Unique ID	NL 008751171B01		
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 *	Giovanni Giapello	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
STD5NK40ZT4	TODP*EZ4166F	A	998G	2018-06-21
Amount	UoM	Unit type	ST ECOPACK Grade	
360.00	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	
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	6.5-6.1-2.3	3	GULL WING	
Comment	TO 252 DPAK			

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		
8a	Lead in solders to attach electrical and electronic components to electronic circuit boards and lead in finishes on terminations of components other than electrolyte aluminium capacitors, on component pins and on electronic circuit boards		

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	1.13	Die - Leadframe	3144
Lead	3.36	Soft solder	9328

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	TODP*EZ4166F					
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	3.788	mg	supplier	die	Silicon (Si)	7440-21-3		3.712	mg	979937	10311
				supplier	metallization	Aluminium (Al)	7429-90-5		0.025	mg	6600	69
				supplier	Passivation	Silicon Oxide	7631-86-9		0.015	mg	3960	42
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.002	mg	527	6
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.025	mg	6600	69
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.009	mg	2376	25
Leadframe	M-004 Copper and its alloys	166.052	mg	supplier	alloy	Copper (Cu)	7440-50-8		164.730	mg	992039	457583
				supplier	alloy	Iron (Fe)	7439-89-6		0.165	mg	993	458
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.050	mg	301	139
				supplier	metallization	Nickel (Ni)	7440-02-0		1.107	mg	6667	3075
Soft solder	Solder	3.631	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	3.358	mg	924814	9328
				supplier	solder	Tin (Sn)	7440-31-5		0.182	mg	50124	506
				supplier	solder	Silver (Ag)	7440-22-4		0.091	mg	25062	253
Bonding wires	M-003 Aluminum and its alloys	0.724	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.724	mg	1000000	2011
Encapsulation	M-011 Other inorganic materials	184.760	mg	supplier	mold compound	Silica Fused	60676-86-0		140.418	mg	760002	390050
				supplier	mold compound	Silica amorphous	7631-86-9		13.118	mg	71000	36439
				supplier	mold compound	Epoxy resin.	Proprietary		18.476	mg	1000000	51322
				supplier	mold compound	Phenolic Resin	Proprietary		7.390	mg	39998	20528
				supplier	mold compound	Flame Retardant	Proprietary		3.695	mg	19999	10264
				supplier	mold compound	Carbon Black	1333-86-4		1.663	mg	9001	4619
connections coating	Solder	1.045	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		1.045	mg	1000000	2903