



Materials Declaration Form

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

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2018-06-14
Contact Name *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Authorized Representative *	Rossana Bonaccorso
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

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
LDP01-42AY	A7D2*TYU042V	A	3068	2018-06-14
Amount	UoM	Unit type	ST ECOPACK Grade	
1380.00	mg	Each	ECOPACK1	
Comment		ECOPACK® or ECOPACK® 1 is STMicroelectronics trade name for ROHS compliant devices		

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles	 life.augmented	
3	245	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy		
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape
SIP	10.2-9.15-4.5	2	gull wing
Comment	D2PAK		

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 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	0.21	Die - Leadframe	149
Lead	16.66	Soft solder	12075
Antimony trioxide	6.62	Mold compound	4797

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	A7D2*TYU042V					
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	21.155	mg	supplier	die	Silicon (Si)	7440-21-3		20.256	mg	957506	14679
				supplier	metallization	Aluminium (Al)	7429-90-5		0.391	mg	18482	283
				supplier	Passivation	Silicon Oxide	7631-86-9		0.077	mg	3640	56
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.078	mg	3685	57
				supplier	back side metallization	Gold (Au)	7440-57-5		0.028	mg	1324	20
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.129	mg	6098	93
Leadframe	M-004 Copper and its alloys	778.632	mg	supplier	polymer die coating	Durimide	Proprietary		0.196	mg	9265	142
				supplier	alloy	Copper (Cu)	7440-50-8		777.536	mg	998592	563432
				supplier	alloy	iron (Fe)	7439-89-6		0.779	mg	1000	564
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.234	mg	301	170
				supplier	metallization	Nickel (Ni)	7440-02-0		0.077	mg	99	56
				supplier	metallization	Phosphorus (P)	7723-14-0		0.006	mg	8	4
Soft solder	Solder	17.449	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	16.664	mg	955012	12075
				supplier	solder	Silver (Ag)	7440-22-4		0.436	mg	24987	316
				supplier	solder	Tin (Sn)	7440-31-5		0.349	mg	20001	253
Bonding Ribbons	M-009 Other non-ferrous metals and	8.361	mg	supplier	Ribbon	Aluminium (Al)	7429-90-5		8.361	mg	1000000	6059
Encapsulation	M-011 Other inorganic materials	551.914	mg	supplier	mold compound	Silica, vitreous	60676-86-0		444.842	mg	805999	322349
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		38.634	mg	70000	27996
				supplier	mold compound	Phenol resin	9003-35-4		22.077	mg	40001	15998
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		33.115	mg	60000	23996
				supplier	mold compound	Antimony Trioxide	1309-64-4		6.623	mg	12000	4799
				supplier	mold compound	Brominated Epoxy Resin	40039-93-8		3.863	mg	6999	2799
Connections coating	Solder	2.489	mg	supplier	mold compound	Carbon black	1333-86-4		2.760	mg	5001	2000
				supplier	solder alloy	Tin (Sn)	7440-31-5		2.489	mg	1000000	1804