



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 *	2018-12-20
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


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
	AAWL*UH77AB1	A	64BA	2018-12-20
Amount	UoM	Unit type	ST ECOPACK Grade	
82.40	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	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFP	3.9-4.9-1.35	12	gull wing	
Comment	Package: PowerSSO 12 monoframe - MDF valid for CPs: L9777A13TR and L9777A			

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
Lead	3.24	Soft solder	39260
Antimony trioxide	0.50	Mold compound	6068

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				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Lead	1000 ppm	3.24	Soft solder	39260
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	3.24	Soft solder	954841

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	AAWL*UH77A1					
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	4.603	mg	supplier	die	Silicon (Si)	7440-21-3		4.435	mg	963502	53823
				supplier	metallization	Aluminium (Al)	7429-90-5		0.033	mg	7169	400
				supplier	metallization	Titanium (Ti)	7440-32-6		0.004	mg	869	49
				supplier	Passivation	Silicon Nitride	12033-89-5		0.007	mg	1522	85
				supplier	Passivation	Silicon Oxide	7631-86-9		0.090	mg	19552	1092
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.034	mg	7386	413
Leadframe	M-004 Copper and its alloys	31.052	mg	supplier	alloy	Copper (Cu)	7440-50-8		29.913	mg	963320	363022
				supplier	alloy	Iron (Fe)	7439-89-6		0.030	mg	966	364
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.009	mg	290	109
				supplier	metallization	Silver (Ag)	7440-22-4		1.100	mg	35424	13350
				supplier	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high met	3.235	mg	954841
Soft solder	Solder	3.388	mg	supplier	solder	Silver (Ag)	7440-22-4		0.085	mg	25089	1032
				supplier	solder	Tin (Sn)	7440-31-5		0.068	mg	20070	823
				supplier	wire	Gold (Au)	7440-57-5		0.342	mg	1000000	4150
Encapsulation	M-011 Other inorganic materials	42.020	mg	supplier	mold compound	Silica, vitreous	60676-86-0		33.869	mg	806021	411032
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		2.941	mg	69990	35692
				supplier	mold compound	Phenol resin	9003-35-4		1.681	mg	40005	20400
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		2.521	mg	59995	30595
				supplier	mold compound	Antimony Trioxide	1309-64-4		0.504	mg	11994	6117
				supplier	mold compound	Brominated Epoxy Resin	40039-93-8		0.294	mg	6997	3568
Connections coating	Solder	0.995	mg	supplier	mold compound	Carbon black	1333-86-4		0.210	mg	4998	2549
				supplier	solder alloy	Tin (Sn)	7440-31-5		0.995	mg	1000000	12075