



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 *	2017-02-23
Contact Name *	Refer to Supplier Comment section		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
STW45N60DM2AG	TSLW*FQ6LA62	A	3068	2017-02-23
Amount	UoM	Unit type	ST ECOPACK Grade	
4430.00	mg	Each	ECOPACK2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
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	15.75-20.15-5.15	3	Through-hole	
Comment	TO 247			

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)

Query : California Prop65 list, dated 27th January 2017			
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	1.07	die back side metal - leadframe metal	241
Lead	19.67	soft solder	4439

QueryList : REACH-12th January 2017				
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 : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	TSLW*FQ6LA62					
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	23.064	mg	supplier	die	Silicon (Si)	7440-21-3		22.133	mg	959634	4996
				supplier	metallization	Aluminium (Al)	7429-90-5		0.448	mg	19424	101
				supplier	Passivation	Silicon Nitride	12033-89-5		0.106	mg	4596	24
				supplier	Passivation	Silicon Oxide	7631-86-9		0.158	mg	6851	36
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.011	mg	477	2
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.154	mg	6677	35
Leadframe	Copper & its alloys	2826.183	mg	supplier	back side metallization	Silver (Ag)	7440-22-4		0.054	mg	2341	12
				supplier	alloy	Copper (Cu)	7440-50-8		2822.369	mg	998650	637104
				supplier	alloy	CopperPhosphorous (CuP)	12517-41-8		2.825	mg	1000	638
Soft solder	Solder	20.592	mg	supplier	metallization	Nickel (Ni)	7440-02-0		0.915	mg	324	207
				supplier	metallization	Phosphorus (P)	12185-10-3		0.074	mg	26	17
				JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	19.665	mg	954983	4439
				supplier	solder	Silver (Ag)	7440-22-4		0.515	mg	25010	116
				supplier	solder	Tin (Sn)	7440-31-5		0.412	mg	20008	93
				supplier	wire	Aluminium (Al)	7429-90-5		1.700	mg	995899	384
Bonding wires	Other inorganic materials	1.707	mg	supplier	wire	Magnesium (Mg)	7439-95-4		0.007	mg	4100	2
				supplier	mold compound	Silica, vitreous	60676-86-0		1347.767	mg	870000	304236
				supplier	mold compound	Epoxy resin	25068-38-6		154.916	mg	100000	34970
Encapsulation	Other Organic Materials	1549.158	mg	supplier	mold compound	Phenol resin	29690-82-2		38.729	mg	25000	8741
				supplier	mold compound	Carbon Black	1333-86-4		7.746	mg	5000	1749
				supplier	solder alloy	Tin (Sn)	7440-31-5		9.296	mg	1000000	2098
Connections coating	Solder	9.296	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		9.296	mg	1000000	2098