



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 *	2017-07-24
Contact Name *	Refer to Supplier Comment section	Refer to Supplier Comment section	
Authorized Representative *	Giuseppe Vitali Palma	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 omprehensive 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
STP45N40DM2AG	XLDZ*FQ4LA62	A	3068	2017-07-24
Amount	UoM	Unit type	ST ECOPACK Grade	
1900.00	mg	Each	ECOPACK1	

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)

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	0.64	Die back side metal - Leadframe metal	339
Lead	19.67	Soft solder	10350
Antimony trioxide	10.11	Encapsulation	5321

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	XLDZ*FQ4LA62					
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	11649
				supplier	metallization	Aluminium (Al)	7429-90-5		0.448	mg	19424	236
				supplier	Passivation	Silicon Nitride	12033-89-5		0.106	mg	4596	56
				supplier	Passivation	Silicon Oxide	7631-86-9		0.158	mg	6851	83
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.011	mg	477	6
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.154	mg	6677	81
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.054	mg	2341	28
				supplier	alloy	Copper (Cu)	7440-50-8		1251.376	mg	998278	658619
				supplier	alloy	Iron (Fe)	7439-89-6		1.253	mg	1000	659
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.376	mg	300	198
Leadframe	Copper & its alloys	1253.535	mg	supplier	metallization	Nickel (Ni)	7440-02-0		0.490	mg	390	258
				supplier	metallization	Phosphorus (P)	12185-10-3		0.040	mg	32	21
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	19.665	mg	954983	10350
				supplier	solder	Silver (Ag)	7440-22-4		0.515	mg	25009	271
				supplier	solder	Tin (Sn)	7440-31-5		0.412	mg	20008	217
				supplier	wire	Aluminium (Al)	7429-90-5		1.611	mg	995674	848
Bonding wires	Other inorganic materials	1.618	mg	supplier	wire	Magnesium (Mg)	7439-95-4		0.007	mg	4326	4
				supplier	Other Organic Materials	594.829	mg	supplier	mold compound	Silica vitreous	60676-86-0	
Encapsulation	Other Organic Materials	594.829	mg	supplier	mold compound	Bisphenol F type epoxy resin	9003-36-5		56.509	mg	95000	29742
				supplier	mold compound	Phenol resin	9003-35-4		49.956	mg	84001	26298
				supplier	mold compound	Antimony Trioxide	1309-64-4		10.112	mg	17000	5322
				supplier	mold compound	Brominated flame retardant	Proprietary		8.922	mg	14999	4696
				supplier	mold compound	Silica Cristobalite	14464-46-1		2.974	mg	5000	1565
				supplier	mold compound	Carbon Black	1333-86-4		2.379	mg	3999	1252
				supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3348
Connections coating	Solder	6.362	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3348