



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 *	2018-04-04
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

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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
STF7NM80	TSFP*M283B52	A	3068	2018-04-04
Amount	UoM	Unit type	ST ECOPACK Grade	
1900	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
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	10.2-16.15-4.5	3	Through-hole	
Comment	TO 220 ISO FULL PACK IN LINE			

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)

QueryList : California Prop65 list, dated 15th December 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	0.67	Die	355
Lead	6.81	Soft solder	3585

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	TSFP*M283B52					
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	7.696	mg	supplier	die	Silicon (Si)	7440-21-3		7.461	mg	969465	3927
				supplier	metallization	Aluminium (Al)	7429-90-5		0.148	mg	19231	78
				supplier	Passivation	Silicon Nitride	12033-89-5		0.035	mg	4548	18
				supplier	Passivation	Silicon Oxide	7631-86-9		0.052	mg	6756	27
Leadframe	M-004 Copper and its alloys	605.985	mg	supplier	alloy	Copper (Cu)	7440-50-8		604.469	mg	997498	318142
				supplier	alloy	Iron (Fe)	7439-89-6		0.605	mg	998	318
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.182	mg	300	96
				supplier	metallization	Nickel (Ni)	7440-02-0		0.674	mg	1112	355
Soft solder	Solder	7.132	mg	supplier	metallization	Phosphorus (P)	7723-14-0		0.055	mg	92	29
				JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	6.811	mg	954992	3585
				supplier	solder	Silver (Ag)	7440-22-4		0.178	mg	24958	94
				supplier	solder	Tin (Sn)	7440-31-5		0.143	mg	20050	75
Bonding wires	M-011 Other inorganic materials	0.534	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.532	mg	996255	280
				supplier	wire	Magnesium (Mg)	7439-95-4		0.002	mg	3745	1
Encapsulation	M-011 Other inorganic materials	1272.787	mg	supplier	mold compound	Quartz	14808-60-7		890.951	mg	700000	468922
				supplier	mold compound	Silica, vitreous	60676-86-0		95.459	mg	75000	50242
				supplier	mold compound	Epoxy resin	25068-38-6		178.190	mg	140000	93784
				supplier	mold compound	phenol resin	29690-82-2		89.095	mg	70000	46892
				supplier	mold compound	metal hydroxide	21645-51-2		12.728	mg	10000	6699
Connections coating	Solder	5.866	mg	supplier	mold compound	carbon black	1333-86-4		6.364	mg	5000	3349
				supplier	solder alloy	Tin (Sn)	7440-31-5		5.866	mg	1000000	3087