



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 *	2017-10-20
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


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
STFW3N170	TSLZ*MSKKBWS	A	Z4LA	2017-10-20
	Amount	UoM	Unit type	ST ECOPACK Grade
	5200.00	mg	Each	ECOPACK® 1

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
Not Applicable	Not Applicable	Not Applicable		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	15.5X14.5X5.7	3	Through-hole	
Comment	Package: TO-3PF/ISOWATT 218			

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
5 - Product(s) is obsolete, no information is available	false
6 - Product(s) is unknown, no information is available	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	0.88	Die/Leadframe	169
Lead	17.50	soft solder	3365
Antimony Trioxide	56.60	mold compound	10884

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						Mfr Item Name	TSLZ*MSKKBWS					
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	26.051	mg	supplier	die	Silicon (Si)	7440-21-3		25.284	mg	970558	4862
				supplier	metallization	Aluminium (Al)	7429-90-5		0.367	mg	14088	71
				supplier	Passivation	Silicon Nitride	12033-89-5		0.089	mg	3416	17
				supplier	Passivation	Silicon Oxide	7631-86-9		0.127	mg	4875	24
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.009	mg	345	2
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.129	mg	4952	25
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.046	mg	1766	9
Leadframe	Copper & its alloys	2352.292	mg	supplier	alloy	Copper (Cu)	7440-50-8		2339.060	mg	994375	449819
				supplier	alloy	Iron (Fe)	7439-89-6		2.497	mg	1062	480
				supplier	alloy	Phosphorus (P)	12185-10-3		9.985	mg	4245	1920
				supplier	metallization	Nickel (Ni)	7440-02-0		0.750	mg	318	144
Soft solder	Solder	18.715	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	17.497	mg	934919	3365
				supplier	solder	Silver (Ag)	7440-22-4		0.281	mg	15015	54
				supplier	solder	Tin (Sn)	7440-31-5		0.937	mg	50066	180
Bonding wire	Other inorganic materials	1.918	mg	supplier	wire	Aluminium (Al)	7429-90-5		1.918	mg	1000000	369
				supplier	mold compound	Crystalline Silica	14808-60-7		2110.670	mg	756668	405898
Encapsulation	Other inorganic materials	2789.428	mg	supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		356.565	mg	127827	68570
				supplier	mold compound	Phenol Resin	9003-35-4		198.091	mg	71015	38094
				supplier	mold compound	Antimony-trioxide	1309-64-4		56.598	mg	20290	10884
				JIG I	mold compound	Brominated epoxy resin	68541-56-0		56.185	mg	20142	10805
				supplier	mold compound	Carbon black	1333-86-4		11.319	mg	4058	2178
Connections coating	Solder	11.596	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		11.596	mg	1000000	2230