



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 *	2018-06-19
Contact Name *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Authorized Representative *	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
STPS20M60D	HSDK*Z16S01W	A	3068	2018-06-19
	Amount	UoM	Unit type	ST ECOPACK Grade
	1860.00	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	10.2-16.25-4.5	2	Through-hole	
Comment	DO 220			

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
Nickel	0.22	Die - Leadframe	120
Lead	10.38	Soft solder	5582

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	HSDK*Z16S01W					
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	12.352	mg	supplier	die	Silicon (Si)	7440-21-3		11.618	mg	940576	6246
				supplier	metallization	Aluminium (Al)	7429-90-5		0.481	mg	38941	259
				supplier	metallization	Nickel (Ni)	7440-02-0		0.052	mg	4210	28
				supplier	metallization	Titanium (Ti)	7440-32-6		0.011	mg	891	6
				supplier	metallization	Tungsten (W)	7440-33-7		0.017	mg	1376	9
				supplier	Passivation	Silicon Oxide	7631-86-9		0.071	mg	5748	38
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.006	mg	486	3
				supplier	back side metallization	Gold (Au)	7440-57-5		0.017	mg	1376	9
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.079	mg	6396	42
				Leadframe	M-004 Copper and its alloys	1184.409	mg	supplier	alloy	Copper (Cu)	7440-50-8	
supplier	alloy	Iron (Fe)	7439-89-6						1.184	mg	1000	637
supplier	alloy	Iron Phosphide (FeP)	26508-33-8						0.355	mg	300	191
supplier	metallization	Nickel (Ni)	7440-02-0						0.092	mg	77	49
supplier	metallization	Phosphorus (P)	7723-14-0						0.007	mg	6	4
Soft solder	Solder	10.871	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	10.382	mg	955018	5582
				supplier	solder	Silver (Ag)	7440-22-4		0.272	mg	25021	146
				supplier	solder	Tin (Sn)	7440-31-5		0.217	mg	19961	117
Bonding wires	M-011 Other inorganic materials	4.925	mg	supplier	wire	Aluminium (Al)	7429-90-5		4.925	mg	1000000	2648
Encapsulation	M-011 Other inorganic materials	643.202	mg	supplier	mold compound	Silica, vitreous	60676-86-0		559.586	mg	870000	300853
				supplier	mold compound	Epoxy resin	25068-38-6		64.320	mg	100000	34581
				supplier	mold compound	Phenol resin	29690-82-2		16.080	mg	25000	8645
				supplier	mold compound	Carbon Black	1333-86-4		3.216	mg	5000	1729
Connections coating	Solder	4.241	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		4.241	mg	1000000	2280