



## Materials Declaration Form

<b>IPC Form Type *</b>	1752 Distribute	<b>Version</b>	2
<b>Sectionals *</b>	Material Info Manufacturing Info	<b>Subsectionals *</b>	A-D  * : Required Field

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2018-06-06
<b>Contact Name *</b>	Refer to Supplier Comment section	<b>Contact Email *</b>	Refer to Supplier Comment section
<b>Contact Phone *</b>	Refer to Supplier Comment section	<b>Authorized Representative *</b>	Rossana Bonaccorso
<b>Authorized Representative *</b>	Rossana Bonaccorso	<b>Representative Title</b>	ADG MD Champion
<b>Representative Phone *</b>	Refer to Supplier Comment section	<b>Representative Email *</b>	Refer to Supplier Comment section
<b>Supplier Comment</b>	Online Technical Support - STMicroelectronics : <a href="http://www.st.com/web/en/support/support.html">http://www.st.com/web/en/support/support.html</a>		

**Uncertainty Statement**

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**Legal Statement**

<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>	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
	HTDZ*Z44P02R	A	3068	2018-06-06
Amount	UoM	Unit type	ST ECOPACK Grade	
1900.00	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	10-9.1-4.5	3	THROUGH HOLE	
Comment	Package: TO 220 AB NON ISOL - MDF valid for CPs: STPS20LCD150CT - STPS16150CT			

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 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	0.54	Die - Leadframe	286
Lead	4.35	Soft solder	2288

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	HTDZ*244P02R					
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	4.926	mg	supplier	die	Silicon (Si)	7440-21-3		4.633	mg	940520	2438
				supplier	metallization	Aluminium (Al)	7429-90-5		0.192	mg	38977	101
				supplier	metallization	Nickel (Ni)	7440-02-0		0.021	mg	4263	11
				supplier	metallization	Titanium (Ti)	7440-32-6		0.004	mg	812	2
				supplier	metallization	Tungsten (W)	7440-33-7		0.007	mg	1421	4
				supplier	Passivation	Silicon Oxide	7631-86-9		0.028	mg	5684	15
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.002	mg	406	1
				supplier	back side metallization	Gold (Au)	7440-57-5		0.007	mg	1421	4
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.032	mg	6496	17
				Leadframe	M-004 Copper and its alloys	1253.534	mg	supplier	alloy	Copper (Cu)	7440-50-8	
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
supplier	metallization	Nickel (Ni)	7440-02-0						0.490	mg	391	258
supplier	metallization	Phosphorus (P)	7723-14-0						0.040	mg	31	21
Soft solder	Solder	4.552	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	4.347	mg	954965	2288
				supplier	solder	Silver (Ag)	7440-22-4		0.114	mg	25044	60
				supplier	solder	Tin (Sn)	7440-31-5		0.091	mg	19991	48
Bonding wires	M-011 Other inorganic materials	2.647	mg	supplier	wire	Aluminium (Al)	7429-90-5		2.647	mg	1000000	1393
				supplier	mold compound	Silica, vitreous	60676-86-0		546.341	mg	869999	287548
Encapsulation	M-011 Other inorganic materials	627.979	mg	supplier	mold compound	Epoxy resin	25068-38-6		62.798	mg	100000	33052
				supplier	mold compound	Phenol resin	29690-82-2		15.700	mg	25001	8263
				supplier	mold compound	Carbon Black	1333-86-4		3.140	mg	5000	1653
Connections coating	Solder	6.362	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3348