



## 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
<i>* : Required Field</i>			

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2017-11-23
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<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
<b>Legal Statement</b>	<p>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.</p>

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
FERD20S100SB-TR	HWDP*ACV1360	A	Z4XA	2017-11-23
Amount		UoM	Unit type	ST ECOPACK Grade
320.00		mg	Each	ECOPACK® 2

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Tin (Sn), matte	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
SIP	6.54,6.10,2.29	2	gull wing	
Comment	Package: TO 252 DPAK			

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	0.02	Die	59
Lead	0.87	Soft solder	2719

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	HWDP*ACV1360					
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	2.779	mg	supplier	die	Silicon (Si)	7440-21-3		2.340	mg	842030	7313
				supplier	metallization	Aluminium (Al)	7429-90-5		0.377	mg	135660	1178
				supplier	Passivation	Silicon Oxide	7631-86-9		0.032	mg	11515	100
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.002	mg	719	6
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.019	mg	6837	59
				supplier	back side metallization	Vanadium (V)	7440-62-2		0.001	mg	360	3
Leadframe	Copper & its alloys	155.932	mg	supplier	back side metallization	Silver (Ag)	7440-22-4		0.008	mg	2879	25
				supplier	alloy	Copper(Cu)	7440-50-8		155.651	mg	998198	486409
				supplier	alloy	Iron(Fe)	7439-89-6		0.234	mg	1501	731
Die attach	Solder	0.911	mg	supplier	alloy	Phosphorus(P)	7723-14-0		0.047	mg	301	147
				supplier	soft solder	Silver(Ag)	7440-22-4		0.023	mg	25246	71
				JIG - R	soft solder	Lead(Pb)	7439-92-1	7a-Lead in high me	0.870	mg	954995	2719
Bonding wire	Other inorganic materials	0.663	mg	supplier	soft solder	Tin(Sn)	7440-31-5		0.018	mg	19759	56
				supplier	wire	Aluminium (Al)	7429-90-5		0.663	mg	1000000	2072
Encapsulation	Other Organic Materials	158.462	mg	supplier	mold compound	Fused Silica	60676-86-0		142.616	mg	900001	445675
				supplier	mold compound	Epoxy Resin	25068-38-6		11.093	mg	70004	34666
				supplier	mold compound	Phenolic resin	29690-82-2		3.644	mg	22996	11388
				supplier	mold compound	mixed siloxanes	proprietary		0.793	mg	5004	2478
Connection coating	Solder	1.253	mg	supplier	mold compound	Carbon black	1333-86-4		0.316	mg	1995	988
				supplier	solder alloy	Tin(Sn)	7440-31-5		1.253	mg	1000000	3916