



## 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>	2017-12-04
<b>Company Unique ID</b>	NL 008751171801		
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Contact Phone *</b>	Refer to Supplier Comment section	<b>Contact Email *</b>	Refer to Supplier Comment section
<b>Authorized Representative *</b>	Floriana SAN BIAGIO	<b>Representative Title</b>	AMG 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
	HZDF*UQ03AA5	A	SH1A	2017-12-04
Amount	UoM	Unit type	ST ECOPACK Grade	
331.3	mg	Each	ECOPACK® 2	
	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
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	6.5-6.1-2.3	3	gull wing	
Comment	Package: DF TO 252 DPAK AU BONDING WIRES; MDF valid for LDF33DT-TR			

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 : REACH-7th July 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 : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	HZDF*UQ03AA5				6000002.0	999999.0
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die or dies	M-011 Other inorganic materials	0.755	mg	supplier	die	Silicon (Si)	7440-21-3		0.713	mg	944371	2152
				supplier	metallization	Aluminium (Al)	7429-90-5		0.007	mg	9272	21
				supplier	metallization	Tungsten (W)	7440-33-7		0.006	mg	7947	18
				supplier	Passivation	Silicon Nitride	12033-89-5		0.002	mg	2649	6
				supplier	Passivation	Silicon Oxide	7631-86-9		0.013	mg	17219	39
				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.001	mg	1325	3
				supplier	back side metallization	Gold (Au)	7440-57-5		0.002	mg	2649	6
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.003	mg	3974	9
Leadframe	M-004 Copper and its alloys	168.228	mg	supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.008	mg	10596	24
				supplier	alloy	Copper (Cu)	7440-50-8		164.152	mg	975771	495478
				supplier	alloy	CopperPhosphorous (CuP)	12517-41-8		0.330	mg	1962	996
				supplier	alloy	Cobalt (Co)	7440-48-4		0.462	mg	2746	1395
	M-006 Nickel and its alloys	supplier	metallization	Nickel (Ni)	7440-02-0		1.107	mg	6580	3341		
		supplier	metallization	Silver (Ag)	7440-22-4		2.177	mg	12941	6571		
Soft solder	Solder	0.611	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	0.584	mg	955810	1763
				supplier	solder	Silver (Ag)	7440-22-4		0.015	mg	24550	45
				supplier	solder	Tin (Sn)	7440-31-5		0.012	mg	19640	36
				supplier	wire	Gold (Au)	7440-57-5		0.277	mg	1000000	836
Encapsulation	M-015 Other organic materials	160.384	mg	supplier	mold compound	Silica, vitreous	60676-86-0		140.336	mg	875000	423592
				supplier	mold compound	Tetramethyl-biphenyl-diyl-bis oxymethylene-bi	85954-11-6		6.415	mg	39998	19363
				supplier	mold compound	Epoxy Resin	Proprietary		4.812	mg	30003	14525
				supplier	mold compound	phenol resin	Proprietary		8.019	mg	49999	24205
				supplier	mold compound	Carbon black	1333-86-4		0.802	mg	5000	2421
connections coating	Solder	1.045	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		1.045	mg	1000000	3154