



## 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>	2017-01-09
<b>Contact Name *</b>	Refer to Supplier Comment section		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

**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
	PK07*1431AE6	A	BO2A	2017-01-09
Amount	UoM	Unit type	ST ECOPACK Grade	
80.00	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
3	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	4.85x3.9x1.52	8	gull wing	
Comment	Package: 07 SO 08 .15; MDF valid for TL1431IYDT			

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	TRUE
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)	FALSE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption Id.	Description

QueryList : REACH-20th June 2016				
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	PK07*1431AE6					
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	1.354	mg	supplier	die	Silicon (Si)	7440-21-3		1.330	mg	982275	16625
				supplier	metallization	Aluminium (Al)	7429-90-5		0.011	mg	8124	138
				supplier	Passivation	Silicon Nitride	12033-89-5		0.006	mg	4431	75
				supplier	Passivation	Silicon Oxide	7631-86-9		0.007	mg	5170	88
Leadframe	Copper & its alloys	31.382	mg	supplier	alloy	Copper (Cu)	7440-50-8		31.071	mg	990090	388388
				supplier	alloy	Iron (Fe)	7439-89-6		0.016	mg	510	200
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.025	mg	797	313
				supplier	metallization	Silver (Ag)	7440-22-4		0.270	mg	8604	3375
Die attach	Other inorganic materials	0.520	mg	supplier	glue	Silver (Ag)	7440-22-4		0.456	mg	876923	5700
				supplier	glue	Isobornyl Methacrylate	7534-94-3		0.026	mg	50000	325
				supplier	glue	Urethane Methacrylate Resin	5888-33-5		0.026	mg	50000	325
				supplier	glue	Acrylate polymer	87320-05-6		0.010	mg	19231	125
				supplier	glue	Epoxyhexylethyltrimethoxysilane	3388-04-3		0.001	mg	1923	13
Bonding wires	Other inorganic materials	0.024	mg	supplier	glue	tert-Butyl peroxy(2-ethyl)-hexanoate	3006-82-4		0.001	mg	1923	13
				supplier	wire	Copper (Cu)	7440-50-8		0.024	mg	1000000	300
Encapsulation	Other Organic Materials	45.662	mg	supplier	mold compound	Silica, vitreous	6076-86-0		39.543	mg	865994	494288
				supplier	mold compound	Epoxy Resin	Proprietary		3.425	mg	75008	42813
				supplier	mold compound	Phenol Resin	Proprietary		2.283	mg	49998	28538
				supplier	mold compound	Carbon black	1333-86-4		0.228	mg	4993	2850
connections coating	Solder	1.058	mg	supplier	mold compound	Bismuth compound	7440-69-9		0.183	mg	4008	2288
				supplier	solder alloy	Tin (Sn)	7440-31-5		1.058	mg	1000000	13225