



## 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>	2018-03-06
<b>Company Unique ID</b>	NL 008751171B01		
<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>	AMS 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
	HUWY*1851AR6	A	Z8GA	2018-03-06
Amount	UoM	Unit type	ST ECOPACK Grade	
16.38	mg	Each	ECOPACK® 3	
	Comment	ECOPACK® 3 is STMicroelectronics trade name for ROHS compliant device without use of any ROHS exemption and without Halogen nor Antimony		

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	
DSO	2.8x1.5x0.9	5	gull wing	
Comment	WY SOT 23-5; MDF valid for TS1851ILT			

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-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

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	HUWY*1851AR6				6000000.0	1000184.0
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	M-011 Other inorganic materials	0.811	mg	supplier	die	Silicon (Si)	7440-21-3		0.804	mg	991369	49084
				supplier	metallization	Aluminium (Al)	7429-90-5		0.003	mg	3699	183
				supplier	Passivation	Silicon Nitride	12033-89-5		0.002	mg	2466	122
				supplier	Passivation	Silicon Oxide	7631-86-9		0.002	mg	2466	122
Leadframe	M-004 Copper and its alloys	5.920	mg	supplier	alloy	Copper (Cu)	7440-50-8		5.769	mg	974493	352198
				supplier	alloy	Iron (Fe)	7439-89-6		0.136	mg	22973	8303
				supplier	alloy	Phosphorus (P)	12185-10-3		0.008	mg	1351	488
				supplier	alloy	Zinc (Zn)	7440-66-6		0.007	mg	1182	427
Die Attach	M-015 Other organic materials	0.091	mg	supplier	glue	Silver (Ag)	7440-22-4		0.074	mg	813187	4518
				supplier	glue	Acrylate resins	7534-94-3		0.011	mg	120879	672
				supplier	glue	Heterocyclic organic compound	3006-93-7		0.003	mg	32967	183
				supplier	glue	Treated silica	Proprietary		0.003	mg	32967	183
Bonding wires	M-008 Precious metals	0.110	mg	supplier	wire	Gold (Au)	7440-57-5		0.110	mg	1000000	6716
Encapsulation	M-011 Other inorganic materials	8.778	mg	supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.703	mg	80087	42918
				supplier	mold compound	Phenol Resin	26834-02-6		0.351	mg	39986	21429
				supplier	mold compound	Silica, vitreous	60676-86-0		7.627	mg	868877	465629
				supplier	mold compound	Carbon black	1333-86-4		0.043	mg	4899	2625
				supplier	mold compound	Bismuth (Bi)	7440-69-9		0.054	mg	6152	3297
connections coating	Solder	0.673	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.673	mg	1000000	41087