



## Materials Declaration Form

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

Supplier Information			
<b>Company Name *</b>	<b>STMicroelectronics</b>	<b>Response Date *</b>	<b>2013-12-11</b>
<b>Contact Name *</b>	Refer to "Supplier Comment" section	<b>Contact Title</b>	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>	Giovanni Giacopello	<b>Representative Title</b>	AMS & IPD Materials Declaration 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/online_tech_support.html">http://www.st.com/web/en/support/online_tech_support.html</a>		

**Uncertainty Statement**

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**Legal Statement**

<b>Supplier Acceptance *</b>	<b>true</b>	<b>Legal Declaration *</b>	<b>Standard</b>
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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
	TDTY*EWFRT5S	A	Z4LA	2013-12-11
Amount	UoM	Unit type	ST ECOPACK Grade	
5380.00	mg	Each	ECOPACK® 1	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
NAC	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable ; if coating is used o	Tin (Sn), matte	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
SIP	15.75 - 20.15 - 5.15	3	Through-hole	
Comment	Package: TO3P-3L; MDF valid for STGWT80H65DFB			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	false
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
Product(s) meets EU RoHS requirements by application of the selected exemption(s)	true
Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Product(s) is obsolete, no information is available	false
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)

QueryList :REACH-20th June 2013				
Query				Response
The product 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	TDY*EWFR155					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Silicon Die	Other inorganic materials	22.844	mg	supplier	die	Silicon (Si)	7440-21-3		21.762	mg	952635	4045
Silicon Die				supplier	metallization	Aluminium (Al)	7429-90-5		0.531	mg	23245	99
Silicon Die				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.126	mg	5516	23
Silicon Die				supplier	passivation	Silicon Oxide (SiO2)	7631-86-9		0.184	mg	8055	34
Silicon Die				supplier	passivation	Esterified polyamid	63428-83-1		0.098	mg	4290	18
Silicon Die				supplier	passivation	Tetraethylene glycol dimethacrylate	109-17-1		0.011	mg	482	2
Silicon Die				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.007	mg	306	1
Silicon Die				supplier	back side metallization	Gold (Au)	7440-57-5		0.022	mg	963	4
Silicon Die				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.103	mg	4509	19
Lead-frame	Other inorganic materials	3402.3	mg	supplier	Alloy	Copper (Cu)	7440-50-8		3384.268	mg	994700	629046
Lead-frame				supplier	Alloy	Iron (Fe)	7439-89-6		3.402	mg	1000	632
Lead-frame				supplier	Alloy	Phosphorus (P)	12185-10-3		13.609	mg	4000	2530
Lead-frame				supplier	Alloy	Nickel (Ni)	7440-02-0		1.021	mg	300	190
Soft solder	Solder	53.98	mg	supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	50.471	mg	934994	9381
Soft solder				supplier	solder	Tin (Sn)	7440-31-5		2.699	mg	50000	502
Soft solder				supplier	solder	Silver (Ag)	7440-22-4		0.81	mg	15006	151
Bonding wire	Other inorganic materials	5.448	mg	supplier	wire	Aluminium (Al)	7429-90-5		5.448	mg	1000000	1013
encapsulation	Other inorganic materials	1881.428	mg	supplier	mold compound	Silica vitreous	60676-86-0		1467.514	mg	780000	272772
encapsulation				supplier	mold compound	Bisphenol F type epoxy resin	9003-36-5		178.736	mg	95000	33222
encapsulation				supplier	mold compound	Phenol resin	9003-35-4		169.329	mg	90000	31474
encapsulation				supplier	mold compound	Antimony Trioxide	1309-64-4		31.984	mg	17000	5945
encapsulation				supplier	mold compound	Brominated flame retardant	Proprietary		28.221	mg	15000	5246
encapsulation				supplier	mold compound	Carbon Black	1333-86-4		5.644	mg	3000	1049
connections coating	Solder	14	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		14	mg	1000000	2602