



Materials Declaration Form

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

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2016-06-10
Contact Name *	Refer to "Supplier Comment" section	Contact Title	Refer to "Supplier Comment" section
Contact Phone *	Refer to "Supplier Comment" section	Contact Email *	Refer to "Supplier Comment" section
Authorized Representative *	Floriana SAN BIAGIO	Representative Title	AMG MD Champion
Representative Phone *	Refer to "Supplier Comment" section	Representative Email *	Refer to "Supplier Comment" section
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/web/en/support/online_tech_support.html		

Uncertainty Statement

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Legal Statement

Supplier Acceptance *	true	Legal Declaration *	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
	DZWY*56VA8TL	A	ZS1A	2016-06-10
Amount	UoM	Unit type	ST ECOPACK Grade	
16.370	mg	Each	ECOPACK® 3	

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 ; if coating is used o	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	2.9-1.6-1.05	5	gull wing	
Comment	Package: WY SOT 23 - 5 ; MDF valid for STM6823TWY6F			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	true
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)	false
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

QueryList :REACH-17 December 2015				
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	DZWW*56VA8TL		16.37			
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	0.552	mg	supplier	die	Silicon (Si)	7440-21-3		0.541	mg	980072	33048
Silicon Die				supplier	metallization	Aluminium (Al)	7429-90-5		0.002	mg	3623	122
Silicon Die				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	1812	61
Silicon Die				supplier	passivation	Silicon Nitride (SiN)	12033-89-5		0.002	mg	3623	122
Silicon Die				supplier	passivation	Silicon Oxide (SiO2)	7631-86-9		0.006	mg	10870	367
Lead-frame	Copper & its alloys	7.761	mg	supplier	alloy	Copper (Cu)	7440-50-8		7.522	mg	969205	459499
Lead-frame				supplier	alloy	Iron (Fe)	7439-89-6		0.177	mg	23011	10812
Lead-frame				supplier	alloy	Phosphorus (P)	12185-10-3		0.002	mg	260	122
Lead-frame				supplier	alloy	Zinc (Zn)	7440-66-6		0.009	mg	1170	550
Lead-frame	Nickel (Ni)			supplier	metallization	Nickel (Ni)	7440-02-0		0.047	mg	6110	2871
Lead-frame	Precious metals			supplier	metallization	Palladium (Pd)	7440-05-3		0.003	mg	390	183
Lead-frame	Precious metals			supplier	metallization	Gold (Au)	7440-57-5		0.001	mg	12821	61
Die Attach	Other Organic Materials	0.081	mg	supplier	glue	Epoxyde Bisphenol A Resin	25068-38-6		0.023	mg	294872	1405
Die Attach				supplier	glue	Aromatic amine	Proprietary		0.003	mg	38462	183
Die Attach				supplier	glue	Glycol ether ester	Proprietary		0.003	mg	38462	183
Die Attach				supplier	glue	silica	60676-86-0		0.025	mg	320513	1527
Die Attach				supplier	glue	Aluminium oxide	1344-28-1		0.027	mg	203008	1649
Bonding wire	Other inorganic materials	0.095	mg	supplier	wire	Gold (Au)	7440-57-5		0.095	mg	981250	11214
encapsulation	Other Organic Materials	7.883	mg	supplier	mold compound	Silica, vitreous	60676-86-0		6.723	mg	853044	416286
encapsulation				supplier	mold compound	phenolic resin	Proprietary		0.276	mg	34982	17071
encapsulation				supplier	mold compound	epoxy resin	Proprietary		0.315	mg	39959	19500
encapsulation				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.159	mg	20053	9786
encapsulation				supplier	mold compound	carbon black	1333-86-4		0.016	mg	2049	1000
encapsulation				supplier	mold compound	Zinc hydroxide	20427-58-1		0.079	mg	9953	4857
encapsulation				supplier	mold compound	Magnesium hydroxide	1309-42-8		0.315	mg	39959	19500