



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 *	2015-02-11
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 *	Giovanni Giacopello	Representative Title	AMS & IPD Materials Declaration 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/internet/com/support/online_tech_support.jsp		

Uncertainty Statement

While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.


Legal Statement

Supplier Acceptance *	true	Legal Declaration *	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
	88V0*UAB5BBA	A	CA2A	2015-02-11
Amount	UoM	Unit type	ST ECOPACK Grade	
130.00	mg	Each	ECOPACK® 2	

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	
Not Applicable ; if coating is used o	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFN	7,7,1	48	No lead	
Comment	Package: VFQFPN 7x7x1.0 48 PITCH 0.5; MDF valid for ST7590; ST7590TR			

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-16th June 2014				
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	88V0*UAB5BBA					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
die (s)	Other inorganic materials	11.485	mg	supplier	die	Silicon (Si)	7440-21-3		10.946	mg	953069	84200
die (s)				supplier	metallization	Aluminium (Al)	7429-90-5		0.114	mg	9926	877
die (s)				supplier	metallization	Copper (Cu)	7440-50-8		0.01	mg	871	77
die (s)				supplier	metallization	Tungsten (W)	7440-33-7		0.09	mg	7836	692
die (s)				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.024	mg	2090	185
die (s)				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.194	mg	16892	1492
die (s)				supplier	passivation	Gamma-butyrolactone	96-48-0		0.064	mg	5572	492
die (s)				supplier	passivation	Polyhydroxyamide	55295-98-2		0.029	mg	2525	223
die (s)				supplier	passivation	Alcoxysilane	proprietary		0.002	mg	174	15
die (s)				supplier	passivation	Aryl Siliclic Acid	proprietary		0.001	mg	87	8
die (s)				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.001	mg	87	8
die (s)				supplier	back side metallization	Gold (Au)	7440-57-5		0.002	mg	174	15
die (s)				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.008	mg	697	62
Leadframe	Copper & its alloys	45.634	mg	supplier	alloy	Copper (Cu)	7440-50-8		44.234	mg	969321	340262
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		1.04	mg	22790	8000
Leadframe				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.063	mg	1381	485
Leadframe				supplier	alloy	Zinc (Zn)	7440-66-6		0.054	mg	1183	415
Leadframe				supplier	metallization	Nickel (Ni)	7440-02-0		0.223	mg	4887	1715
Leadframe				supplier	metallization	Palladium (Pd)	7440-05-3		0.014	mg	307	108
Leadframe				supplier	metallization	Gold (Au)	7440-57-5		0.006	mg	131	46
Die attach	Other inorganic materials	2.672	mg	supplier	glue or tape	Silver (Ag)	7440-22-4		1.828	mg	684132	14062
Die attach				supplier	glue or tape	methylene diacrylate	42594-17-2		0.668	mg	250000	5138
Die attach				supplier	glue or tape	Dicyclopentenloxyethyl methacrylate	68586-19-6		0.08	mg	29940	615
Die attach				supplier	glue or tape	Polymer of Polybutadiene + Anhydride	Proprietary		0.08	mg	29940	615
Die attach				supplier	glue or tape	Palladium (Pd)	7440-05-3		0.003	mg	1123	23
Die attach				supplier	glue or tape	Bis(α,α-dimethylbenzyl) peroxide	80-43-3		0.013	mg	4865	100
Bonding wire	Precious metals	3.536	mg	supplier	wire	Gold (Au)	7440-57-5		3.5	mg	989819	26923
Bonding wire				supplier	wire	Copper (Cu)	7440-50-8		0.021	mg	5939	162
Bonding wire				supplier	wire	Palladium (Pd)	7440-05-3		0.011	mg	3111	85
Bonding wire				supplier	wire	Platinum (Pt)	7440-06-4		0.004	mg	1131	31
encapsulation	Other inorganic materials	66.673	mg	supplier	mold compound	silica vitreous	60676-86-0		56.873	mg	853014	437485
encapsulation				supplier	mold compound	Phenol resin	Proprietary		2.333	mg	34992	17946
encapsulation				supplier	mold compound	epoxy resin	Proprietary		2.667	mg	40001	20515
encapsulation				supplier	mold compound	carbon black	1333-86-4		0.133	mg	1995	1023
encapsulation				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		1.334	mg	20008	10262
encapsulation				supplier	mold compound	Zinc hydroxide	20427-58-1		0.666	mg	9989	5123
encapsulation				supplier	mold compound	Magnesium hydroxide	1309-42-8		2.667	mg	40001	20515