	Materials Declaration Form

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

Supplier Information			
Company Name *	STMicroelectronics	**Response Date ***	2014-06-13
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

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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 omprehensive 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
	HDWB*UM08BA5	A	ZS1A	2014-06-13
	Amount	UoM	Unit type	ST ECOPACK Grade
	16.80	mg	Each	ECOPACK® 2

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
1	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	
SOT	2.9X1.625X1.175	6	gull wing	
Comment	Package: SOT 23 - 6L; MDF valid for TSM1052			

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 December 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	HDWB*UM08BA5					
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	0.506	mg	supplier	Die	Silicon (Si)	7440-21-3		0.494	mg	976285	29405
Silicon die				supplier	metallization	Aluminium (Al)	7429-90-5		0.007	mg	13834	417
Silicon die				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.002	mg	3953	119
Silicon die				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.003	mg	5929	179
Lead frame	Copper and its alloy	8.614	mg	supplier	alloy	Copper (Cu)	7440-50-8		8.321	mg	965986	495298
Lead frame				supplier	alloy	Iron (Fe)	7439-89-6		0.194	mg	22521	11548
Lead frame				supplier	alloy	Phosphorus (P)	12185-10-3		0.002	mg	244	119
Lead frame				supplier	alloy	Zinc (Zn)	7440-66-6		0.011	mg	1219	595
Lead frame				supplier	metallization	Silver (Ag)	7440-22-4		0.086	mg	9995	4881
Die attach	Other organic materials	0.081	mg	supplier	Glue	Silver (Ag)	7440-22-4		0.067	mg	820513	3810
Die attach				supplier	Glue	Carbocyclic Acrylates	proprietary		0.008	mg	102564	476
Die attach				supplier	Glue	Bismaleimide resin	proprietary		0.002	mg	25641	119
Die attach				supplier	Glue	2-preponoic acid, 2-methyl	68586-19-6		0.002	mg	25641	119
Die attach				supplier	Glue	Additive	proprietary		0.002	mg	25641	119
Bonding wire	Other inorganic materials	0.179	mg	supplier	Bonding wire	Copper (Cu)	7440-50-8		0.176	mg	982456	10000
Bonding wire				supplier	Bonding wire	Palladium (Pd)	7440-05-3		0.003	mg	17544	179
Encapsulation	Other organic materials	6.582	mg	supplier	Molding compound	Epoxy Resin-1	Proprietary		0.197	mg	29989	11190
Encapsulation				supplier	Molding compound	Epoxy Resin-2	Proprietary		0.197	mg	29989	11190
Encapsulation				supplier	Molding compound	Phenol resin	Proprietary		0.297	mg	45143	16845
Encapsulation				supplier	Molding compound	Silica	60676-86-0		5.877	mg	892806	333155
Encapsulation				supplier	Molding compound	Carbon Black	1333-86-4		0.014	mg	2074	774
Finishing	Solder	0.838	mg	supplier	Connection coating	Tin	7440-31-5		0.838	mg	2074	774