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 ***	**2013-04-16**
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 *	**Giuseppe Vitali Palma**	**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**
	HVWV*KR05FC1	A	ZS1A	2013-04-16
	Amount	**UoM**	**Unit type**	**ST ECOPACK Grade**
	17.014	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	kel/Palladium/Gold (Ni/Pd/Au), ENE	Copper Alloy		

Package Designator	**Size**	**Nbr of instances**	**Shape**	
SOT	2.8X1.5X0.9	4	gull wing	
Comment	Package: SOT 23 5L			

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-19 December 2012				
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	HVWV*KR05FC1					
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	0.939	mg		Silicon die	Silicon (Si)	7440-21-3		0.932	mg	992545	54778
Silicon die					Passivation	Gamma-butyrolactone	96-48-0		0.005	mg	5325	294
Silicon die					Passivation	Polyhydroxyamide	55295-98-2		0.002	mg	2130	118
Leadframe	Copper & its alloys	7.84	mg		Alloy	Copper	7440-50-8		7.527	mg	960077	442400
Leadframe					Alloy	Iron	7439-89-6		0.176	mg	22449	10344
Leadframe					Alloy	Iron phosphide(FeP)	26508-33-8		0.005	mg	638	294
Leadframe					Alloy	Zinc	7440-66-6		0.015	mg	1913	882
Leadframe					Plating	Nickel	7440-02-0		0.096	mg	12245	5642
Leadframe					Plating	Palladium	7440-05-3		0.015	mg	1913	882
Leadframe					Plating	Gold	7440-57-5		0.006	mg	765	353
Die attach	Other Organic Materials	0.087	mg		Glue	Silver	7440-22-4		0.064	mg	735632	3762
Die attach					Glue	Carbocyclic Acrylates	Proprietary		0.007	mg	80460	411
Die attach					Glue	Bismaleimide resin	Proprietary		0.004	mg	45977	235
Die attach					Glue	2-preponoic acid, 2-methyl	68586-19-6		0.004	mg	45977	235
Die attach					Glue	Additive	Proprietary		0.008	mg	91954	470
Bonding wire	Precious metals	0.16	mg		Bonding wire	Gold (Au)	7440-57-5		0.16	mg	1000000	9404
Encapsulation	Other Organic Materials	7.988	mg		Molding compound	Epoxy resin-1	Proprietary		0.241	mg	30170	14165
Encapsulation					Molding compound	Epoxy resin-2	Proprietary		0.241	mg	30170	14165
Encapsulation					Molding compound	Phenol resin	Proprietary		0.363	mg	45443	21335
Encapsulation					Molding compound	Silica	60676-86-0		7.11	mg	890085	417891
Encapsulation					Molding compound	Carbon Black	1333-86-4		0.033	mg	4131	1940