



Materials Declaration Form

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

** : Required Field*

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2016-01-12
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 *	Antonella Lanzafame	Representative Title	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/web/en/support/support.html		

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 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
	HWD2*Z11P02R	A	Z4XA	2016-01-12
Amount	UoM	Unit type	ST ECOPACK Grade	
1380.00	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
1	245	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	10.2X9.15X4.5	2	gull wing	
Comment	Package: D2PAK, MD valid for CP:STPS20150CG-TR,STPS20170CG-TR.			

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-15th June 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	HWD2*Z1P02R					
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	7.075	mg	supplier	die	Silicon (Si)	7440-21-3		6.641	mg	938657	4812
Silicon die				supplier	metallization	Aluminium (Al)	7429-90-5		0.275	mg	38869	199
Silicon die				supplier	metallization	Titanium (Ti)	7440-32-6		0.006	mg	848	4
Silicon die				supplier	metallization	Titanium Nitride (TiN)	25583-20-4		0.007	mg	989	5
Silicon die				supplier	metallization	Tungsten (W)	7440-33-7		0.01	mg	1413	7
Silicon die				supplier	metallization	Nickel (Ni)	7440-02-0		0.007	mg	989	5
Silicon die				supplier	Passivation	Silicon Oxide(SiO2)	7631-86-9		0.04	mg	5654	29
Silicon die				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.005	mg	707	4
Silicon die				supplier	back side metallization	Gold (Au)	7440-57-5		0.015	mg	2120	11
Silicon die				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.069	mg	9753	50
Leadframe	Copper & its alloys	783.785	mg	supplier	alloy	Copper(Cu)	7440-50-8		782.377	mg	998204	566940
Leadframe				supplier	alloy	Iron	7439-89-6		0.862	mg	1100	625
Leadframe				supplier	alloy	Silicon(Si)	7440-21-3		0.156	mg	199	113
Leadframe				supplier	alloy	Nickel Sulfamate	13770-89-3		0.39	mg	498	283
Die attach	Solder	3.96	mg	supplier	Solder	Silver(Ag)	7440-22-4		0.098	mg	24747	71
Die attach				JIG R	Solder	Lead(Pb)	7439-92-1	7a-Lead in high me	3.783	mg	95303	2741
Die attach				supplier	Solder	Tin(Sn)	7440-31-5		0.079	mg	19949	57
Bonding wire	Other inorganic materials	1.045	mg	supplier	Bonding wire	Aluminium (Al)	7429-90-5		1.045	mg	1000000	757
Encapsulation	Other Organic Materials	576.992	mg	supplier	Mold compound	silica	60676-86-0		519.83	mg	900931	376688
Encapsulation				supplier	Mold compound	epoxy resin	25068-38-6		40.995	mg	71050	29707
Encapsulation				supplier	Mold compound	phenolic resin	29690-82-2		14.436	mg	25019	10461
Encapsulation				supplier	Mold compound	mixed siloxanes	Proprietary		1.154	mg	2000	836
Encapsulation				supplier	Mold compound	pigment	1333-86-4		0.577	mg	1000	418
Finishing	Solder	7.143	mg	supplier	Connection coating	Tin(Sn)	7440-31-5		7.143	mg	1000000	5176