



## Materials Declaration Form

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

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2015-04-22
<b>Contact Name *</b>	Refer to "Supplier Comment" section	<b>Contact Title</b>	Refer to "Supplier Comment" section
<b>Contact Phone *</b>	Refer to "Supplier Comment" section	<b>Contact Email *</b>	Refer to "Supplier Comment" section
<b>Authorized Representative *</b>	Giovanni Giacobello	<b>Representative Title</b>	AMS & IPD Materials Declaration Champion
<b>Representative Phone *</b>	Refer to "Supplier Comment" section	<b>Representative Email *</b>	Refer to "Supplier Comment" section
<b>Supplier Comment</b>	Online Technical Support - STMicroelectronics : <a href="http://www.st.com/internet/com/support/online_tech_support.jsp">http://www.st.com/internet/com/support/online_tech_support.jsp</a>		

**Uncertainty Statement**


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Legal Statement			
<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>	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
	H8DZ*Z43P02R	A	Z45A	2015-04-22
Amount	UoM	Unit type	ST ECOPACK Grade	
1900.00	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
NAC	NAC	NAC		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable ; if coating is used	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10X9.1X4.5	3	Through-hole	
Comment	Package: TO 220 AB NON ISOL; MDF valid for STPS60170CT			

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-17th December 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	H8D2*243P02R					
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	16.804	mg	supplier	die	Silicon (Si)	7440-21-3		16.275	mg	968519	8566
die (s)				supplier	metallization	Aluminium (Al)	7429-90-5		0.101	mg	6010	53
die (s)				supplier	metallization	Titanium (Ti)	7440-32-6		0.015	mg	893	8
die (s)				supplier	metallization	Tungsten (W)	7440-33-7		0.024	mg	1428	13
die (s)				supplier	metallization	Nickel (Ni)	7440-02-0		0.074	mg	4404	39
die (s)				supplier	metallization	Gold (Au)	7440-57-5		0.072	mg	4285	38
die (s)				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.1	mg	5951	53
die (s)				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.008	mg	476	4
die (s)				supplier	back side metallization	Gold (Au)	7440-57-5		0.024	mg	1428	13
die (s)				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.111	mg	6606	58
Leadframe	Copper & its alloys	1206.412	mg	supplier	alloy	Copper (Cu)	7440-50-8		1204.83	mg	998689	634121
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		0.555	mg	460	292
Leadframe				supplier	alloy	Iron Phosphide (Fe2P)	1310-43-6		1.013	mg	840	533
Leadframe				supplier	metallization	Nickel (Ni)	7440-02-0		0.013	mg	11	7
Leadframe				supplier	metallization	Phosphorus (P)	12185-10-3		0.001	mg	1	1
Soft solder	Solder	11.109	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	7.221	mg	650014	3801
Soft solder				supplier	solder	Silver (Ag)	7440-22-4		2.777	mg	249977	1462
Soft solder				supplier	solder	Antimony (Sb)	7440-36-0		1.111	mg	100009	585
Bonding wire	Other inorganic materials	9.85	mg	supplier	wire	Aluminium (Al)	7429-90-5		9.85	mg	1000000	5184
encapsulation	Other Organic Materials	649.463	mg	supplier	mold compound	Silica, vitreous	60676-86-0		565.032	mg	869999	297385
encapsulation				supplier	mold compound	Epoxy resin	Proprietary		64.946	mg	100000	34182
encapsulation				supplier	mold compound	Phenol resin	Proprietary		16.237	mg	25001	8546
encapsulation				supplier	mold compound	Carbon Black	1333-86-4		3.248	mg	5001	1709
connections coating	Solder	6.362	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3348