



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 *	2015-08-17
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 Giacobello	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/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 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*Z42P021	A	Z45A	2015-08-17
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 STPS40120CT			

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		H8DZ*242P021					
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	10.201	mg	supplier	die	Silicon (Si)	7440-21-3		9.882	mg	968729	5201	
die (s)				supplier	metallization	Aluminium (Al)	7429-90-5		0.061	mg	5980	32	
die (s)				supplier	metallization	Titanium (Ti)	7440-32-6		0.009	mg	882	5	
die (s)				supplier	metallization	Tungsten (W)	7440-33-7		0.015	mg	1470	8	
die (s)				supplier	metallization	Nickel (Ni)	7440-02-0		0.044	mg	4313	23	
die (s)				supplier	metallization	Gold (Au)	7440-57-5		0.044	mg	4313	23	
die (s)				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.06	mg	5882	32	
die (s)				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.005	mg	490	3	
die (s)				supplier	back side metallization	Gold (Au)	7440-57-5		0.014	mg	1372	7	
die (s)				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.067	mg	6568	35	
Leadframe	Copper & its alloys	1213.271	mg	supplier	alloy	Copper (Cu)	7440-50-8		1211.68	mg	998689	637726	
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		0.558	mg	460	294	
Leadframe				supplier	alloy	Iron Phosphide (Fe2P)	1310-43-6		1.019	mg	840	536	
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	7.16	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	4.654	mg	650000	2449	
Soft solder				supplier	solder	Silver (Ag)	7440-22-4		1.79	mg	250000	942	
Soft solder				supplier	solder	Antimony (Sb)	7440-36-0		0.716	mg	100000	377	
Bonding wire	Other inorganic materials	9.85	mg	supplier	wire	Aluminium (Al)	7429-90-5		9.85	mg	1000000	5184	
encapsulation	Other Organic Materials	653.156	mg	supplier	mold compound	Silica, vitreous	60676-86-0		568.245	mg	869999	299076	
encapsulation				supplier	mold compound	Epoxy resin	25068-38-6		65.316	mg	100001	34377	
encapsulation				supplier	mold compound	Phenol resin	29690-82-2		16.329	mg	25000	8594	
encapsulation				supplier	mold compound	Carbon Black	1333-86-4		3.266	mg	5000	1719	
connections coating	Solder	6.362	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3348	