



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 *	01/28/2015
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
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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
	T2D2*DF57B62	A	SH1A	01/28/2015
Amount	UoM	Unit type	ST ECOPACK Grade	
1483.00	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	
NAC	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	10.2X9.15X4.5	3	gull wing	
Comment	Package: D2PAK; MD valid for STB20NM50FDT4			

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-16th June 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	T2D2*DF57862					
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	23.819	mg	supplier	die	Silicon (Si)	7440-21-3		23.118	mg	970570	15589
die (s)				supplier	metallization	Aluminium (Al)	7429-90-5		0.336	mg	14106	227
die (s)				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.081	mg	3401	55
die (s)				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.116	mg	4870	78
die (s)				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.008	mg	336	5
die (s)				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.118	mg	4954	80
die (s)				supplier	back side metallization	Silver (Ag)	7440-22-4		0.042	mg	1763	28
Leadframe	Copper & its alloys	828.545	mg	supplier	alloy	Copper (Cu)	7440-50-8		827.369	mg	998581	557902
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		0.828	mg	999	558
Leadframe				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.249	mg	301	168
Leadframe				supplier	metallization	Nickel (Ni)	7440-02-0		0.092	mg	111	62
Leadframe				supplier	metallization	Phosphorus (P)	12185-10-3		0.007	mg	8	5
Soft solder	Other Organic Materials	13.612	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	13	mg	955040	8766
Soft solder				supplier	solder	Silver (Ag)	7440-22-4		0.34	mg	24978	229
Soft solder				supplier	solder	Tin (Sn)	7440-31-5		0.272	mg	19982	183
Bonding wire	Other inorganic materials	0.774	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.773	mg	998708	521
Bonding wire				supplier	wire	Magnesium (Mg)	7439-95-4		0.001	mg	1292	1
encapsulation	Other Organic Materials	615.205	mg	supplier	mold compound	Epoxy Resin	Proprietary		18.456	mg	30000	12445
encapsulation				supplier	mold compound	2,2'-([3,3',5,5'-tetramethyl-(1,1'-biphenyl)-4,4'	EC 413-900-7		24.608	mg	40000	16593
encapsulation				supplier	mold compound	phenol resin	Proprietary		30.76	mg	50000	20742
encapsulation				supplier	mold compound	Silica, vitreous	60676-86-0		538.305	mg	875001	362984
encapsulation				supplier	mold compound	Carbon black	1333-86-4		3.076	mg	5000	2074
connections coating	Solder	1.045	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		1.045	mg	1000000	705