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 ***	**2015-03-05**
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 Giacopello**	**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.

Signature Not
Verified

Digitally signed by
Giovanni Giacopello
Date: 2015.03.05
14:08:01 +01:00

Product				
Mfr Item Number	**Mfr Item Name**	**Version**	**Mfr Site**	**Date**
	TSLW*MD69B62	A	SH1A	2015-03-05
	Amount	**UoM**	**Unit type**	**ST ECOPACK Grade**
	4430.00	mg	Each	ECOPACK® 2

Manufacturing information				
J-STD-020 MSL Rating	**Classification Temp**	**Nbr of Reflow Cycles**		
NAC	NAC	NAC		
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	15.75X20.15X5.15	3	Through-hole	
Comment	Package: TO 247; MDF valid for STW45NM60			

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	TSLW*MD69B62					
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	56.986	mg	supplier	die	Silicon (Si)	7440-21-3		55.309	mg	970572	12485
die (s)				supplier	metallization	Aluminium (Al)	7429-90-5		0.803	mg	14091	181
die (s)				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.195	mg	3422	44
die (s)				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.277	mg	4861	63
die (s)				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.02	mg	351	5
die (s)				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.282	mg	4949	64
die (s)				supplier	back side metallization	Silver (Ag)	7440-22-4		0.1	mg	1755	23
Leadframe	Copper & its alloys	2721.203	mg	supplier	alloy	Copper (Cu)	7440-50-8		2705.639	mg	994280	610754
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		1.246	mg	458	281
Leadframe				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		2.276	mg	836	514
Leadframe				supplier	metallization	Nickel (Ni)	7440-02-0		11.968	mg	4398	2702
Leadframe				supplier	metallization	Phosphorus (P)	12185-10-3		0.074	mg	27	17
Soft solder	Other Organic Materials	28.654	mg	JIG R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	27.365	mg	955015	6177
Soft solder				supplier	solder	Silver (Ag)	7440-22-4		0.716	mg	24988	162
Soft solder				supplier	solder	Tin (Sn)	7440-31-5		0.573	mg	19997	129
Bonding wire	Other inorganic materials	2.716	mg	supplier	wire	Aluminium (Al)	7429-90-5		2.716	mg	1000000	613
encapsulation	Other Organic Materials	1614.244	mg	supplier	mold compound	Silica, vitreous	60676-86-0		1404.393	mg	870000	317019
encapsulation				supplier	mold compound	Epoxy resin	Proprietary		161.424	mg	100000	36439
encapsulation				supplier	mold compound	Phenol resin	Proprietary		40.356	mg	25000	9110
encapsulation				supplier	mold compound	Carbon Black	1333-86-4		8.071	mg	5000	1822
connections coating	Other inorganic materials	6.197	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.197	mg	1000000	1399