



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 *	2018-08-30
Company Unique ID	NL 008751171B01		
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Authorized Representative *	Floriana SAN BIAGIO	Representative Title	AMS MD 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
	C9EH*UA89AA5	A	MU1A	2018-08-30
Amount	UoM	Unit type	ST ECOPACK Grade	
480	mg	Each	ECOPACK® 2	
Comment	ECOPACK® 2 is STMicroelectronics trade name for ROHS compliant device without Brominated and Chlorinated compound (900ppm) and without Antimony oxide flame retardant (in each organic material)			

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles	 life.augmented	
3	260	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	10.3x7.5x2.28	36	gull wing	
Comment	EH PowerSSO36; MDF valid for TDA7491P13TR			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-March 2015	
Query	Response
1 - Product(s) meets EU RoHS requirement without any exemptions	FALSE
2 - 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
3 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	TRUE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	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-27th June 2018				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Lead	1000 ppm	3.86	solder	8042
2 - Product(s) does not contain REACH Substances Of Very High Concern in any Embedded article nor Homogeneous Material above the limits per the definition within REACH				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material
Lead	1000 ppm	3.86	solder	974994

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	C9EH*UA89AA5				6000000.0	1000002.0
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	M-011 Other inorganic materials	6.376	mg	supplier	die	Silicon (Si)	7440-21-3		6.122	mg	960163	12754
				supplier	metallization	Aluminium (Al)	7429-90-5		0.047	mg	7371	98
				supplier	metallization	Tungsten (W)	7440-33-7		0.037	mg	5803	77
				supplier	Passivation	Silicon Nitride	12033-89-5		0.010	mg	1568	21
				supplier	Passivation	Silicon Oxide	7631-86-9		0.080	mg	12547	167
				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.004	mg	627	8
				supplier	back side metallization	Gold (Au)	7440-57-5		0.009	mg	1412	19
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.017	mg	2666	35
				supplier	back side metallization	Vanadium (V)	7440-62-2		0.001	mg	157	2
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.049	mg	7685	102
Leadframe	M-004 Copper and its alloys	133.366	mg	supplier	alloy	Copper (Cu)	7440-50-8		128.102	mg	960530	266879
				supplier	alloy	Iron (Fe)	7439-89-6		3.013	mg	22592	6277
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.181	mg	1357	377
				supplier	alloy	Zinc (Zn)	7440-66-6		0.158	mg	1185	329
				supplier	metallization	Silver (Ag)	7440-22-4		1.912	mg	14336	3983
Soft solder	Solder	3.959	mg	SVHC	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	3.860	mg	974994	8042
				supplier	solder	Silver (Ag)	7440-22-4		0.059	mg	14903	123
				supplier	solder	Tin (Sn)	7440-31-5		0.040	mg	10104	83
Bonding wires	M-011 Other inorganic materials	1.776	mg	supplier	wire	Copper (Cu)	7440-50-8		1.776	mg	1000000	3700
Encapsulation	M-015 Other organic materials	330.291	mg	supplier	mold compound	silica vitreous	60676-86-0		292.307	mg	884998	608973
				supplier	mold compound	Biphenyl epoxy resin	89954-11-6		17.505	mg	52999	36469
				supplier	mold compound	Phenol Resin	205830-20-2		13.212	mg	40001	27525
				supplier	mold compound	epoxy resin	Proprietary		6.606	mg	20001	13763
				supplier	mold compound	carbon black	1333-86-4		0.661	mg	2001	1377
connections coating	Solder	4.233	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		4.233	mg	1000000	8819