



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 *	2018-11-19
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Antonella Lanzafame	Representative Title	AMG MD CHAMPION
Representative Phone *	Refer to Supplier Comment section		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
TS461CDT	ID07*0461AR6	A	BO2A	2018-11-19
	Amount	UoM	Unit type	ST ECOPACK Grade
	80.00	mg	Each	ECOPACK® 3
	Comment	ECOPACK® 3 is STMicroelectronics trade name for ROHS compliant device without use of any ROHS exemption and without Halogen nor Antimony		

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	4.85 x 3.9 x 1.52	8	gull wing	
Comment	Package for: 07 SO 08 .15 JEDEC			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
1 - Product(s) meets EU RoHS requirement without any exemptions	true
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)	false
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Exemption Id.	Description

QueryList : REACH-27th Jun 2018				
Query				Response
1 - Product(s) 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	IDO7*0461AR6					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	Other inorganic materials	1.680	mg	supplier	die	Silicon (Si)	7440-21-3		1.674	mg	996429	20925
				supplier	metallization	Aluminium (Al)	7429-90-5		0.002	mg	1190	25
				supplier	Passivation	Silicon Nitride	12033-89-5		0.002	mg	1190	25
				supplier	Passivation	Silicon Oxide	7631-86-9		0.001	mg	595	13
				supplier	glass coating	Glass: Silicon Dioxide	7631-86-9		0.001	mg	595	13
Leadframe	Copper & its alloys	28.956	mg	supplier	alloy	Copper (Cu)	7440-50-8		27.900	mg	963531	348750
				supplier	alloy	Iron (Fe)	7439-89-6		0.656	mg	22655	8200
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.040	mg	1381	500
				supplier	alloy	Zinc (Zn)	7440-66-6		0.034	mg	1174	425
				supplier	metallization	Nickel (Ni)	7440-02-0		0.304	mg	10499	3800
				supplier	metallization	Palladium (Pd)	7440-05-3		0.012	mg	414	150
				supplier	metallization	Gold (Au)	7440-57-5		0.010	mg	345	125
				supplier	glue	Silver (Ag)	7440-22-4		0.231	mg	909449	2888
Die attach		0.254	mg	supplier	glue	acrylate	Proprietary		0.013	mg	51181	163
				supplier	glue	Methacrylate	Proprietary		0.010	mg	39370	125
				supplier	wire	Copper (Cu)	7440-50-8		0.045	mg	1000000	563
				supplier	mold compound	Silica, vitreous	60676-86-0		42.491	mg	866014	531138
Encapsulation	Other Organic Materials	49.065	mg	supplier	mold compound	Epoxy Resin	25068-38-6		3.680	mg	75003	46000
				supplier	mold compound	Phenol Resin	29690-82-2		2.453	mg	49995	30663
				supplier	mold compound	Carbon black	1333-86-4		0.245	mg	4993	3063
				supplier	mold compound	Bismuth (Bi)	7440-69-9		0.196	mg	3995	2450