



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 *	2017-02-03
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	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	<p>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.</p>		

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
LD59015C33R	HVW8*UQ54BA5	A	ZS1A	2017-02-03
	Amount	UoM	Unit type	ST ECOPACK Grade
	5.42	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
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SOT	1.80,1.80.0.8	5	gull wing	
Comment				

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 2015	
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

ELV directive : 2000/53/EC amended 2016/774 _May 2016	
Query	Response
1 - Product(s) meets EU ELV requirements without any exemptions	TRUE
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	FALSE
Exemption Id.	Description

QueryList : REACH-12th January 2017				
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 : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	HVW8*UQ54BA5					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die or Dies (choose)	Other inorganic materials	0.479	mg	Supplier	Silicon die	Silicon (Si)	7440-21-3		0.479	mg	1000000	88704
Leadframe		2.396	mg	Supplier	Alloy	Copper	7440-50-8		2.304	mg	961603	426667
Leadframe				Supplier	Alloy	Iron	7439-89-6		0.056	mg	23372	10370
Leadframe				Supplier	Alloy	Phosphorus	7723-14-0		0.001	mg	417	185
Leadframe				Supplier	Alloy	Zinc	7440-66-0		0.003	mg	1252	556
Leadframe				Supplier	Coating	Nickel	7440-02-0		0.028	mg	11686	5185
Leadframe				Supplier	Coating	Palladium	7440-05-3		0.003	mg	1252	556
Leadframe				Supplier	Coating	Gold	7440-57-5		0.001	mg	417	185
Die Attach	Other inorganic materials	0.020	mg	supplier	Glue	Epoxyde Bisphenol A Resin	25068-38-6		0.002	mg	320225	10556
Die Attach				Supplier	Glue	Silica, vitreous	60676-86-0		0.006	mg	219101	7222
Die Attach				Supplier	Glue	Ethoxyethoxy-ethyl Acetate	112-15-2		0.004	mg	179775	5926
Die Attach				Supplier	Glue	Aluminium oxide	1344-28-1		0.004	mg	95506	3148
Die Attach				Supplier	Glue	Bisphenol A diglycidyl ether polymer	25036-25-3		0.003	mg	50562	1667
Die Attach				Supplier	Glue	Glycol ether ester	Proprietary		0.0004	mg	50562	1667
Die Attach				Supplier	Glue	Diaminodiphenylsulfone	80-08-0		0.0004	mg	84270	2778
Bonding wire	Other inorganic materials	0.029	mg	supplier	Bonding wire	Gold (Au)	7440-57-5		0.029	mg	1000000	5370
Encapsulation	Other Organic Materials	2.318	mg	supplier	Molding compound	Epoxy resin-1	25068-38-6		0.087	mg	37532	16111
Encapsulation				Supplier	Molding compound	Biphenyl epoxy resin	85954-11-6		0.044	mg	18982	8148
Encapsulation				Supplier	Molding compound	Phenol resin	29690-82-2		0.088	mg	37964	16296
Encapsulation				Supplier	Molding compound	Silica	60676-86-0		1.978	mg	853322	366296
Encapsulation				Supplier	Molding compound	Carbon Black	1333-86-4		0.005	mg	2157	926
Encapsulation				Supplier	Molding compound	Magnesium hydroxide	1309-42-8		0.087	mg	37532	16111
Encapsulation				Supplier	Molding compound	Zinc hydroxide	20427-58-1		0.029	mg	12511	5370