



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 *	2017-02-14
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		

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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
TDE1708DFT	AB31*1708BA6	A	SA1A	2017-02-14
	Amount	UoM	Unit type	ST ECOPACK Grade
	40.10	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	Nicel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFP	4x4x1.0	8	flat	
Comment	VFDFPN 4x4x1.0 8L PITCH 0.8			

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	AB31*1708BA6					
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	3.863	mg	supplier	die	Silicon (Si)	7440-21-3		3.793	mg	981832	99726
Die				supplier	metallization	Aluminium (Al)	7429-90-5		0.032	mg	8348	848
Die				supplier	Passivation	Silicon Nitride	12033-89-5		0.017	mg	4419	449
Die				supplier	Passivation	Silicon Oxide	7631-86-9		0.021	mg	5401	549
Leadframe	Copper & its alloys	14.809	mg	supplier	Alloy	Copper	7440-50-8		14.265	mg	963299	375098
Leadframe				supplier	Alloy	Iron	7439-89-6		0.334	mg	22561	8785
Leadframe				supplier	Alloy	Phosphorus	7723-14-0		0.004	mg	240	93
Leadframe				supplier	Alloy	Zinc	7440-66-6		0.019	mg	1250	487
Leadframe				supplier	Alloy	Nickel	7440-02-0		0.170	mg	11500	4478
Leadframe				supplier	Alloy	Palladium	7440-05-3		0.015	mg	1000	389
Leadframe				supplier	Alloy	Gold	7440-57-5		0.002	mg	150	58
Die attach	Other Organic Materials	0.570	mg	supplier	Adhesive	Silver (Ag)	7440-22-4		0.484	mg	850000	12718
Die attach				supplier	Adhesive	Carbocyclic acrylate	Proprietary		0.057	mg	100000	1496
Die attach				supplier	Adhesive	2-Propenoic acid, 2-methyl-, 2-[[2,3,3a,4,7,7a]]	68586-19-6		0.026	mg	45000	673
Die attach				supplier	Adhesive	2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane	3388-04-3		0.003	mg	5000	75
Bonding wire Au	Other inorganic materials	0.068	mg	supplier	Bonding wire	Gold (Au)	7440-50-8		0.068	mg	1000000	1796
Encapsulation	Other Organic Materials	20.790	mg	supplier	Mold compound	Silica Fused (Si)	60676-86-0		19.480	mg	937000	512196
Encapsulation				supplier	Mold compound	Epoxy Resin	25068-38-6		0.624	mg	30000	16399
Encapsulation				supplier	Mold compound	Phenol Resin	29690-82-2		0.624	mg	30000	16399
Encapsulation				supplier	Mold compound	Carbon Black (C)	1333-86-4		0.062	mg	3000	1640