



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 *	2017-06-14
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Floriana San Biagio	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

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
	HBL6*Q472AR6	A	ZY1A	2017-06-14
Amount	UoM	Unit type	ST ECOPACK Grade	
44.00	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	
ting is used or other bulk terminat	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFN	4x4x1	24	No lead	
Comment	Package: L6 VFQFPN2 24 4x4x1.0 PITCH 0.5; MDF valid for TS472IQT			

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

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						Mfr Item Name	HBL6*Q472AR6					
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	2.595	mg	supplier	die	Silicon (Si)	7440-21-3		2.551	mg	983044	57977
				supplier	metallization	Aluminium (Al)	7429-90-5		0.009	mg	3468	205
				supplier	metallization	Titanium (Ti)	7440-32-6		0.004	mg	1541	91
				supplier	Passivation	Silicon Nitride	12033-89-5		0.007	mg	2697	159
				supplier	Passivation	Silicon Oxide	7631-86-9		0.024	mg	9249	545
Leadframe	Copper & its alloys	24.082	mg	supplier	alloy	Copper (Cu)	7440-50-8		22.935	mg	952371	521250
				supplier	alloy	Iron (Fe)	7439-89-6		0.565	mg	23462	12841
				supplier	alloy	Zinc (Zn)	7440-66-6		0.028	mg	1163	636
				supplier	alloy	Phosphorous (P)	12185-10-3		0.007	mg	291	159
				supplier	metallization	Silver(Ag)	7440-22-4		0.547	mg	22714	12432
Die attach	Other Organic Materials	0.755	mg	supplier	glue	Silver(Ag)	7440-22-4		0.574	mg	760265	13045
				supplier	glue	Reaction product: bisphenol-F-(epichlorhydrin)	9003-36-5		0.053	mg	70199	1205
				supplier	glue	Fatty acids, C18-unsatd., dimers, polymers with	68475-94-5		0.030	mg	39735	682
				supplier	glue	gamma- Butyrolactone	96-48-0		0.030	mg	39735	682
				supplier	glue	Polyoxyalkylene amine	9046-10-0		0.030	mg	39735	682
				supplier	glue	Epoxy Resin	25068-38-6		0.030	mg	39735	682
				supplier	glue	Epoxy Resin Modifier	Proprietary		0.004	mg	5298	91
				supplier	glue	Substituted Silane	Proprietary		0.004	mg	5298	91
Bonding wires	Precious metals	0.420	mg	supplier	wire	Gold (Au)	7440-57-5		0.420	mg	1000000	9545
Encapsulation	Other Organic Materials	15.356	mg	supplier	mold compound	Epoxy Resin	25068-38-6		1.152	mg	75020	26182
				supplier	mold compound	Phenol Resin	205830-20-2		0.998	mg	64991	22682
				supplier	mold compound	Silica Amorphous A	60676-86-0		10.749	mg	699987	244295
				supplier	mold compound	Silica Amorphous B	7631-86-9		2.380	mg	154988	54091
				supplier	mold compound	Carbon Black	1333-86-4		0.077	mg	5014	1750
Finishing	Other inorganic materials	0.792	mg	supplier	coating	Tin (Sn)	7440-31-5		0.792	mg	1000000	18000