



## Materials Declaration Form

<b>IPC Form Type *</b>	1752 Distribute	<b>Version</b>	2
<b>Sectionals *</b>	Material Info Manufacturing Info	<b>Subsectionals *</b>	A-D <i>* : Required Field</i>

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2018-10-22
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Authorized Representative *</b>	Floriana SAN BIAGIO	<b>Representative Title</b>	AMS MD CHAMPION
<b>Representative Phone *</b>	Refer to Supplier Comment section	<b>Representative Email *</b>	Refer to Supplier Comment section
<b>Supplier Comment</b>	Online Technical Support - STMicroelectronics : <a href="http://www.st.com/web/en/support/support.html">http://www.st.com/web/en/support/support.html</a>		

**Uncertainty Statement**


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Legal Statement			
<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>	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
STEF05PUR	QRWQ*UW70AD6	A	Z6HA	2018-10-22
Amount	UoM	Unit type	ST ECOPACK Grade	
21.00	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		

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	
ing is used or other bulk terminat	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFN	3x3x1	10	No lead	
Comment	WQ VDFPN 3x3x1.0 10 PITCH 0.50; MDF valid for STEF05PUR			

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	<b>true</b>
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 June 2018				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				<b>true</b>
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product

Material Composition Declaration						Mfr Item Name	QRWQ*UW70AD6					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Dies	Other inorganic materials	1.590	mg	supplier	die	Silicon (Si)	7440-21-3		1.519	mg	955346	72333
				supplier	metallization	Aluminium (Al)	7429-90-5		0.022	mg	13836	1048
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	629	48
				supplier	metallization	Nickel (Ni)	7440-02-0		0.004	mg	2516	190
				supplier	metallization	Silver (Ag)	7440-22-4		0.002	mg	1258	95
				supplier	Passivation	Silicon Nitride	12033-89-5		0.007	mg	4403	333
				supplier	Passivation	Silicon Oxide	7631-86-9		0.015	mg	9434	714
				supplier	back side metallization	Gold (Au)	7440-57-5		0.001	mg	629	48
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.007	mg	4403	333
				supplier	polymer die coating	PIXI Gamma-butyrolactone	96-48-0		0.012	mg	7547	571
Leadframe	Copper & its alloys	8.179	mg	supplier	Alloy	Copper (Cu)	7440-50-8		7.847	mg	959408	373667
				supplier	Alloy	Iron (Fe)	7439-89-6		0.184	mg	22497	8762
				supplier	Alloy	Phosphorus (P)	7723-14-0		0.010	mg	1223	476
				supplier	Alloy	Zinc (Zn)	7440-66-6		0.008	mg	978	381
				supplier	metallization	Silver (Ag)	7440-22-4		0.002	mg	245	95
				supplier	metallization	Nickel (Ni)	7440-02-0		0.122	mg	14916	5810
				supplier	metallization	Gold (Au)	7440-57-5		0.002	mg	245	95
				supplier	metallization	Palladium (Pd)	7440-5-3		0.004	mg	489	190
				supplier	Glue	Silver (Ag)	7440-22-4		0.061	mg	884058	4952
				supplier	Glue	Propionic acid, methyl	Proprietary		0.007	mg	101449	571
Die attach 1	Other Organic Materials	0.069	mg	supplier	Glue	2-Propenoic acid, 2-methyl	68586-19-6		0.001	mg	14493	571
				supplier	Glue	Silver (Ag)	7440-22-4		0.026	mg	361111	190
				supplier	Glue	acrylate	65983-31-5		0.015	mg	208333	190
				supplier	Glue	copolymer	64401-02-1		0.003	mg	41667	1714
				supplier	Glue	Epoxy resin	65983-31-5		0.022	mg	305556	9619
				supplier	Glue	Butadiene copolymer	68891-50-9		0.004	mg	55556	5762
Die attach 2	Other Organic Materials	0.072	mg	supplier	Glue	peroxyde de cyclohexylidenebis	3006-86-8		0.002	mg	27778	10333
				supplier	wire	Copper (Cu)	7440-50-8		0.043	mg	1000000	381
Bonding wires 1	Other inorganic materials	0.043	mg	supplier	wire	Copper (Cu)	7440-50-8		0.052	mg	1000000	5762
Bonding wires 2	Other inorganic materials	0.052	mg	supplier	wire	Copper (Cu)	7440-50-8		0.052	mg	1000000	5762
Encapsulation	Other Organic Materials	10.995	mg	supplier	molding compound	Epoxy resin	29690-82-2		0.329	mg	29923	5762
				supplier	molding compound	Phenol resin	25068-38-6		0.329	mg	29923	9619
				supplier	molding compound	Silica (Amorphous) A	60676-86-0		8.824	mg	802547	420190
				supplier	molding compound	Silica (Amorphous) B	7631-86-9		1.485	mg	135061	70714
				supplier	molding compound	Carbon Black	1333-86-4		0.028	mg	2547	1333