



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 *	2018-06-01
Company Unique ID	NL 008751171B01		
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Authorized Representative *	Floriana SAN BIAGIO	Representative Title	AMS 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
	RVVV*UX58AB5	A	ZS1A	2018-06-01
Amount	UoM	Unit type	ST ECOPACK Grade	
16	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	
Not Applicable	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	2.8x1.5x0.9	5	gull wing	
Comment	WV SOT 23 SL; MDF valid for LDK220M50R			

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-15th January 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 : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	RVWV*UX58AB5				5000000.0	999943.0
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	M-011 Other inorganic materials	0.408	mg	supplier	die	Silicon (Si)	7440-21-3		0.385	mg	943627	24063
				supplier	metallization	Aluminium (Al)	7429-90-5		0.005	mg	12255	313
				supplier	metallization	Tungsten (W)	7440-33-7		0.004	mg	9804	250
				supplier	Passivation	Silicon Nitride	12033-89-5		0.001	mg	2451	63
				supplier	Passivation	Silicon Oxide	7631-86-9		0.008	mg	19608	500
				supplier	polymer die coating	PIXI Gamma-butyrolactone	96-48-0		0.005	mg	12255	313
Leadframe	M-004 Copper and its alloys	6.956	mg	supplier	alloy	Copper (Cu)	7440-50-8		6.701	mg	963341	418813
				supplier	alloy	Iron (Fe)	7439-89-6		0.157	mg	22570	9813
				supplier	alloy	Phosphorus (P)	12185-10-3		0.002	mg	288	125
				supplier	alloy	Zinc (Zn)	7440-66-6		0.008	mg	1150	500
				supplier	metallization	Nickel (Ni)	7440-02-0		0.080	mg	11501	5000
				supplier	metallization	Palladium (Pd)	7440-05-3		0.007	mg	1006	438
Die Attach	M-008 Precious metals	0.067	mg	supplier	metallization	Gold (Au)	7440-57-5		0.001	mg	144	63
				supplier	glue	Silver (Ag)	7440-22-4		0.054	mg	805970	3375
				supplier	glue	Carbocyclic Acrylates	proprietary		0.007	mg	104478	438
				supplier	glue	Bismaleimide resin	35325-39-4		0.002	mg	29851	125
Bonding wires	M-015 Other organic materials	0.116	mg	supplier	glue	2-preponoic acid, 2-methyl	68586-19-6		0.002	mg	29851	125
				supplier	glue	Additive	proprietary		0.002	mg	29851	125
				supplier	wire	Gold (Au)	7440-57-5		0.116	mg	1000000	7250
Encapsulation	M-015 Other organic materials	8.452	mg	supplier	mold compound	Epoxy Resin A	25068-38-6		0.254	mg	30052	15875
				supplier	mold compound	Epoxy Resin B	Proprietary		0.254	mg	30052	15875
				supplier	mold compound	Phenol Resin	29690-82-2		0.380	mg	44960	23750
				supplier	mold compound	Silica	80676-86-0		7.378	mg	872929	461125
				supplier	mold compound	Carbon Black	1333-86-4		0.017	mg	2011	1063
				supplier	mold compound	Others	Proprietary		0.169	mg	19995	10563