



Materials Declaration Form

IPC	1752	Version	2
Form Type *	Distribute		
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D

** : Required Field*

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2020-10-01
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 *	giovanni giacopello	Representative Title	ADG 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
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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
STP70NS04ZC	XEDE*BM4GA31	A	64BA	2020-10-01
	Amount	UoM	Unit type	ST ECOPACK Grade
	1900	mg	Each	ECOPACK 1
Comment	ECOPACK® or ECOPACK® 1 is STMicroelectronics trade name for ROHS compliant devices			

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
Not Applicable	Not Applicable	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	CD00205989	

Package Designator	Size	Nbr of instances	Shape	
SIP	10.00,9.10,4.50	3	Through-hole	
Comment	TO 220 MONOC.			

QueryList : RoHS Directive 2011/65/EU-July 2011 Annex II amended by Delegated Directive 2015/863-March 2015	
Query	Response
1 - Product(s) meets EU RoHS requirement without any exemptions	FALSE
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)	TRUE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption Id.	Description
7a	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)

QueryList : ELV directive : 2000/53/EC amended 2020/363_ March 2020	
Query	Response
1 - Product(s) meets EU ELV requirements without any exemptions	FALSE
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	TRUE
Exemption Id.	Description
8e	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)

QueryList : California Prop65 list, dated 3rd January 2020			
Query			Response
1 - The product does not contain identified substance from California Prop 65 List, no exposure to consumers is foreseen			FALSE
2 - The product is containing below substance(s) from California Prop 65 List, no exposure to consumers is foreseen			TRUE
Substance	amount in product (mg)	Application	ppm in product
Nickel	0.75	die - leadframe	396
Lead	4.39	soft solder	2313
Antimony trioxide	10.59	encapsulation	5574

QueryList : REACH-25th June 2020				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Lead	1000 ppm	4.39	Soft solder	2313
2 - Product(s) does not contain REACH Substances Of Very High Concern in any Embedded article nor Homogeneous Material above the limits per the definition within REACH				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material
Lead	1000 ppm	4.394	Soft solder	955010

Responsible metals sourcing	
Query	Response
The component is containing at least one of the following metals : Cobalt , Gold , Tantalum , Tin , Tungsten.	true
The following metals are present is the component :	Gold, Tin,
This product is in the scope of the responsible metals sourcing, its compliance is covered by our company processes .	

Material Composition Declaration :						Mfr Item Name	XEDE*BM4GA31					
note : Substance present with less 0.001mg will not be declared in this document												
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	8.385	mg	supplier	die	Silicon(Si)	7440-21-3		8.111	mg	967322	4271
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.107	mg	12761	56
				supplier	metallisation	Gold(Au)	7440-57-5		0.012	mg	1431	6
				supplier	metallisation	Nicke(Ni)	7440-02-0		0.088	mg	10495	46
				supplier	metallisation	Silver(Ag)	7440-22-4		0.020	mg	2385	11
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.010	mg	1193	5
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.035	mg	4174	18
				supplier	passivation	Silicon oxide	7631-86-9		0.002	mg	239	1
Leadframe	M-004 Copper and its alloys	1253.737	mg	supplier	alloy & coating	Copper(Cu)	7440-50-8		1251.376	mg	998118	658619
				supplier	alloy & coating	Nicke(Ni)	7440-02-0		0.665	mg	530	350
				supplier	alloy & coating	Iron(Fe)	7439-89-6		1.253	mg	999	659
				supplier	alloy & coating	Iron Phosphide(FeP)	26508-33-8		0.376	mg	300	198
				supplier	alloy & coating	Phosphorus metal	7723-14-0		0.067	mg	53	35
Soft solder	Solder	4.601	mg	SVHC	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	4.394	mg	955009	2313
				supplier	solder	Silver(Ag)	7440-22-4		0.115	mg	24995	61
				supplier	solder	Tin(Sn)	7440-31-5		0.092	mg	19996	48
Bonding wires	M-003 Aluminum and its alloys	4.156	mg	supplier	wire	Aluminium (Al)	7429-90-5		4.156	mg	1000000	2187
Bonding wires 2	M-003 Aluminum and its alloys	0.137	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.136	mg	992701	72
				supplier	wire	Magnesium (Mg)	7439-95-4		0.001	mg	7299	1
Encapsulation	M-011 Other inorganic materials	622.622	mg	supplier	mold compound	Silica vitreous	60676-86-0		485.645	mg	780000	255603
				supplier	mold compound	Bisphenol F type epoxy resin	9003-36-5		59.149	mg	95000	31131
				supplier	mold compound	Phenol resin	9003-35-4		52.300	mg	84000	27526
				supplier	mold compound	Antimony trioxide	1309-64-4		10.585	mg	17000	5571
				supplier	mold compound	Brominated flame retardant	proprietary		9.339	mg	14999	4915
				supplier	mold compound	Silica Cristobalite	14464-46-1		3.113	mg	5000	1638
				supplier	mold compound	Carbon black	1333-86-4		2.491	mg	4001	1311
connections coating	Solder	6.362	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3348