

## **Materials Declaration Form**

IPC	1752		
Form Type *	Distribute	Version	2
Sectionals *	Material Info	Subcoctionals *	A-D
Sectionals	Manufacturing Info	Subsectionals	* · Pequired Field
	Manufacturing into		. Required Held
Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2020-06-08
Company Unique ID	NI 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 *	Rossana Bonaccorso	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.htm	ml	
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Legal Statement			
Supplier Acceptance *	true	Legal Declaration	* Standard
Legal Statement	Supplier certifies that it gathered the provide that Supplier completes this form. Supplier ackr acknowledges that Supplier may have relied on verified such information. However, in situatio minimum, its suppliers have provided certificati certification in this paragraph. If the Compan conditions of that agreement, including any wa Supplier's liability and the Company's remedies for	d information and such information nowledges that Company will rely on information provided by others in c ons where Supplier has not indepen ons regarding their contributions to t y and the Supplier enter into a wr arranty rights and/or remedies provide or issues that arise regarding information	is true and correct to the best of its knowledge and belief, as of the date this certification in determining the compliance of its products. Company completing this form, and that Supplier may not have independently dently verified information provided by others, Supplier agrees that, at a the part(s), and those certifications are at least as omprehensive as the ritten agreement with respect to the identified part(s), the terms and ed as part of that agreement, will be the sole and exclusive source of the on the Supplier provides in this form.

luct				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STPS30150CT	H1DZ*Z04P02R	А	3068	2020-06-08
	Amount	UoM	Unit type	ST ECOPACK Grade
	1950	mg	Each	ECOPACK 2
Comment	ECOPACK® 2 is STMicroelectronics trade na Antimony oxide flame retardant ( in each orga	ame for ROHS compliant device with anic material)	out Brominated and Chlorinated co	ompound (900ppm) and without

Manufacturing information					
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles			
Not Applicable	Not Applicable	Not Applicable			
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	life.gugmented	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	DM00624102	IIIe.dugmented	

Package Designator	Size	Nbr of instances	Shape	
SIP	10.00,9.10,4.50	3	Through hole	
Comment	TO 220 AB NON ISOL			

QueryList : RoHS Directive 2011/65/EU-	uly 2011 – Annex II amended by Directive 2015/863-March 2015	
	Query	Response
1 - Product(s) meets EU RoHS requirement w	ithout any exemptions	FALSE
2 - Product(s) meets EU RoHS requirements e	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 I	by application of the selected exemption(s)	TRUE
4 - Product(s) does not meet EU RoHS require	ements and is not under exemptions	FALSE
Exemption Id.	Description	
	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 ar	nended 2017/2096 _November 2017	
	Query	Response
1 - Product(s) meets EU ELV requirements with	thout 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)	

Query			Response
- The product does not contain identified substance from California Prop 65 List, no exposure to co	onsumers is foreseen		FALSE
- The product is containing below substance(s) from California Prop 65 List, no exposure to consur	mers is foreseen		TRUE
ubstance	amount in product (mg)	Application	ppm in product
lickel	0.78	Die - Leadframe	400
ead	5.44	Soft solder	2791

QueryList : REACH-16th January 2020	)			
	Query			Response
1 - Product(s) does not contain REACH Subst	ances Of Very High Concern above the limits per the de	finition within REACH		FALSE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Lead	1000 ppm	5.44	Soft solder	2791
2 - Product(s) does not contain REACH Su REACH	bstances Of Very High Concern in any Embedded ar	ticle nor Homogeneous Material above	the limits per the definition within	FALSE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material
Lead	1000 ppm	5.44	Soft solder	954904

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document				Mfr Item Name	н	11DZ*204P02R						
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	10.779	mg	supplier	die	Silicon(Si)	7440-21-3		10.138	mg	940533	5199
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.420	mg	38965	215
				supplier	metallisation	Gold(Au)	7440-57-5		0.015	mg	1392	8
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.115	mg	10669	59
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.014	mg	1299	7
				supplier	metallisation	Tungsten(W)	7440-33-7		0.015	mg	1392	8
				supplier	passivation	Silicon oxide	7631-86-9		0.062	mg	5750	32
Leadframe	M-004 Copper and its alloys	1253.736	mg	supplier	alloy & coating	Copper(Cu)	7440-50-8		1251.375	mg	998117	641731
				supplier	alloy & coating	Nickel(Ni)	7440-02-0		0.665	mg	530	341
				supplier	alloy & coating	Iron(Fe)	7439-89-6		1.253	mg	999	643
				supplier	alloy & coating	Iron Phosphide(FeP)	26508-33-8		0.376	mg	301	193
				supplier	alloy & coating	Phosphorus metal	7723-14-0		0.067	mg	53	34
Soft solder	Solder	5.699	mg	SVHC	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	5.442	mg	954904	2791
				supplier	solder	Silver(Ag)	7440-22-4		0.143	mg	25092	73
				supplier	solder	Tin(Sn)	7440-31-5		0.114	mg	20004	58
Bonding wires	M-003 Aluminum and its alloys	4.706	mg	supplier	wire	Aluminium (Al)	7429-90-5		4.706	mg	1000000	2413
Encapsulation	M-011 Other inorganic materials	668.718	mg	supplier	mold compound	Silica vitreous	60676-86-0		468.102	mg	699999	240052
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		103.651	mg	155000	53154
				supplier	mold compound	Quartz	14808-60-7		33.436	mg	50000	17147
				supplier	mold compound	Phenol resin	9003-35-4		40.123	mg	60000	20576
				supplier	mold compound	Metal hydroxide	21645-51-2		20.062	mg	30001	10288
				supplier	mold compound	Carbon black	1333-86-4		3.344	mg	5000	1715
Connections coating	Solder	6.362	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3263