



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 *	2020-04-14
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
STPS40L45CT	H4DZ*Z02Q02Y	A	9945	2020-04-14
	Amount	UoM	Unit type	ST ECOPACK Grade
	1950	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		
Not Applicable	Not Applicable	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	DM00624279	



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-July 2011 – Annex II amended by 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 2017/2096 _November 2017	
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	0.82	die - leadframe	421
Lead	7.30	soft solder	3741

QueryList : REACH-16th January 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	7.30	Soft solder	3741
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	7.295	Soft solder	954968

Material Composition Declaration :						Mfr Item Name	H4DZ*Z02Q02Y					
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	14.451	mg	supplier	die	Silicon(Si)	7440-21-3		13.746	mg	951214	7049
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.085	mg	5882	44
				supplier	metallisation	Gold(Au)	7440-57-5		0.081	mg	5605	42
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.156	mg	10795	80
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.020	mg	1384	10
				supplier	metallisation	Tungsten(W)	7440-33-7		0.020	mg	1384	10
				supplier	passivation	Silicon oxide	7631-86-9		0.084	mg	5813	43
				supplier	polymer coating	Durimide	proprietary		0.259	mg	17923	133
Leadframe	M-004 Copper and its alloys	1253.737	mg	supplier	alloy & coating	Copper(Cu)	7440-50-8		1251.376	mg	998117	641731
				supplier	alloy & coating	Nickel(Ni)	7440-02-0		0.665	mg	531	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	300	193
				supplier	alloy & coating	Phosphorus metal	7723-14-0		0.067	mg	53	34
Soft solder	Solder	7.639	mg	SVHC	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	7.295	mg	954968	3741
				supplier	solder	Silver(Ag)	7440-22-4		0.191	mg	25003	98
				supplier	solder	Tin(Sn)	7440-31-5		0.153	mg	20029	78
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	663.105	mg	supplier	mold compound	Silica vitreous	60676-86-0		464.174	mg	700000	238038
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		102.781	mg	155000	52708
				supplier	mold compound	Quartz	14808-60-7		33.155	mg	50000	17003
				supplier	mold compound	Phenol resin	9003-35-4		39.786	mg	60000	20403
				supplier	mold compound	Metal hydroxide	proprietary		19.893	mg	30000	10202
				supplier	mold compound	Carbon black	1333-86-4		3.316	mg	5000	1700
connections coating	Solder	6.362	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3263