



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 *	2021-03-26
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 *	marianna grasso	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

While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.


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
STGF5H60DF	XDFP*EI62R82	A	3068	2021-03-26
	Amount	UoM	Unit type	ST ECOPACK Grade
	1690	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
Not Applicable	Not Applicable	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	DM00670868	

Package Designator	Size	Nbr of instances	Shape	
SIP	10.20,16.15,4.50	3	Through hole	
Comment	TO 220 ISO FULL PACK IN LINE			

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	0.94	die - leadframe	556
Lead	2.13	soft solder	1261

QueryList : REACH-19th January 2021				
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	2.13	Soft solder	1261
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	2.131	Soft solder	954749

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 :	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	XDFP*Ei62R82					
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	2.561	mg	supplier	die	Silicon(Si)	7440-21-3		0.912	mg	356111	539
				supplier	die	Silicium carbide	409-21-2		1.554	mg	606794	920
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.046	mg	17962	27
				supplier	metallisation	Gold(Au)	7440-57-5		0.001	mg	390	1
				supplier	metallisation	Nicke(Ni)	7440-02-0		0.024	mg	9372	14
				supplier	metallisation	Silver(Ag)	7440-22-4		0.008	mg	3124	5
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.002	mg	781	1
				supplier	metallisation	Vanadium(V)	7440-62-2		0.001	mg	390	1
				supplier	passivation	Silicon oxide	7631-86-9		0.013	mg	5076	8
				supplier	alloy & coating	Copper(Cu)	7440-50-8		604.469	mg	997041	357674
Leadframe	M-004 Copper and its alloys	606.263	mg	supplier	alloy & coating	Nickel(Ni)	7440-02-0		0.915	mg	1509	541
				supplier	alloy & coating	Iron(Fe)	7439-89-6		0.605	mg	998	358
				supplier	alloy & coating	Iron Phosphide(FeP)	26508-33-8		0.182	mg	300	108
				supplier	alloy & coating	Phosphorus metal	7723-14-0		0.092	mg	152	54
Soft solder	Solder	2.232	mg	SVHC	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	2.131	mg	954749	1261
				supplier	solder	Silver(Ag)	7440-22-4		0.056	mg	25090	33
				supplier	solder	Tin(Sn)	7440-31-5		0.045	mg	20161	27
Bonding wires	M-003 Aluminum and its alloys	0.764	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.764	mg	1000000	452
Bonding wires 2	M-003 Aluminum and its alloys	0.152	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.151	mg	993421	89
				supplier	wire	Magnesium (Mg)	7439-95-4		0.001	mg	6579	1
Encapsulation	M-011 Other inorganic materials	1072.162	mg	supplier	mold compound	Quartz	14808-60-7		750.513	mg	700000	444091
				supplier	mold compound	Silica vitreous	60676-86-0		80.412	mg	75000	47581
				supplier	mold compound	Epoxy type resin	proprietary		150.103	mg	140000	88818
				supplier	mold compound	Phenol type resin	proprietary		75.051	mg	70000	44409
				supplier	mold compound	Metal hydroxide	proprietary		10.722	mg	10000	6344
				supplier	mold compound	Carbon black	1333-86-4		5.361	mg	5000	3172
connections coating	Solder	5.866	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		5.866	mg	1000000	3471