



## Material declaration form

General Information			
IPC	1752	Version	2
Form type*	Distribute		
Sectionals*	Material information	Subsectionals*	A-D
	Manufacturing information		

Supplier Information			
Company name*	STMicroelectronics	Response Date*	2023-06-07
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	ADGMaterial Declaration champion
Representative phone*	Refer to Supplier Comment section	Representative email*	Refer to Supplier Comment section
Supplier comment	Online Technical Support - STMicroelectronics : <a href="http://www.st.com/web/en/support/support.html">http://www.st.com/web/en/support/support.html</a>		

**Uncertainty statement**

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**Legal statement**

Supplier acceptance*	true	Legal declaration*	Standard
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	Manufacturing site	date
STGD4H60DF	VLDP*EI61R8F	A	998G	2023-06-07
	Amount	Unit of measure	Unit type	ST ECOPACK grade
	330.00	mg	Each	ECOPACK® 2
Identity	Authority			
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 temperature	Number of reflow cycles		
1	260	3		
Bulk solder termination	Terminal plating	Terminal base alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	DM00898208	
Package designator	Package size	Number of instances	Shape	
SIP	6.50x6.10x2.30	3	Gull wing	
Comment	TO 252 DPAK			



QueryList : RoHS Directive 2011/65/EU- 8 June 2011 – Annex II amended by Delegated Directive 2015/863 - 31 March 2015		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		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	
8(e)	8(e) - Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)	

QueryList : California Prop65 list, dated 25th Feb 2022			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	1.141	die	3458
Lead	1.612	soft solder	4885

QueryList : REACH-17 Jan 2023				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	1.61	Soft solder	4885
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	1.61	Soft solder	954976

QueryList : Responsible metals sourcing		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, Tungsten,

QueryList : Korea Chemical Control Act_ 27 Dec 2017 update		Response
The Product does contain at least one of the substances listed in Chemical Control Act		false

QueryList : China GB 33372-2020 Limit standard for volatile organic compounds content in adhesives - 4 March 2020 application date 1st December 2020		Response
The product contains adhesives identified under GB 33372		false

Stockholm Convention Persistent Organic Pollutants		Response
Product is compliant with Stockholm Convention Persistent Organic Pollutants Annex I		true



Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	VLDP*E161R8F					
Homogeneous material	Material group	Mass	Unit of measure	Level	Substance category	Substance	CAS	Exempt	Mass	Unit of measure	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Dies	M-011 Other inorganic materials	1.834	mg	supplier	die	Silicon(Si)	7440-21-3		1.699	mg	926391	5150
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.043	mg	23446	130
				supplier	metallisation	Gold(Au)	7440-57-5		0.005	mg	2726	15
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.034	mg	18539	103
				supplier	metallisation	Silver(Ag)	7440-22-4		0.021	mg	11450	64
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.003	mg	1636	9
				supplier	metallisation	Tungsten(W)	7440-33-7		0.018	mg	9815	55
				supplier	metallisation	Vanadium(V)	7440-62-2		0.001	mg	545	3
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.001	mg	545	3
				supplier	passivation	Silicon oxide	7631-86-9		0.009	mg	4907	27
Leadframe	M-004 Copper and its alloys	166.071	mg	supplier	alloy	Copper(Cu)	7440-50-8		164.749	mg	992039	499239
				supplier	alloy	Iron phosphide	26508-33-8		0.139	mg	837	421
				supplier	alloy	Iron(Fe)	7439-89-6		0.076	mg	458	230
				supplier	metallization	Nickel (Ni)	7440-02-0		1.107	mg	6666	3355
Soft solder	Solder	1.688	mg	SVHC	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temperat	1.612	mg	954976	4885
				supplier	solder	Tin(Sn)	7440-31-5		0.034	mg	20142	103
				supplier	solder	Silver(Ag)	7440-22-4		0.042	mg	24882	127
Bonding wires	M-003 Aluminum and its alloys	0.132	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.132	mg	1000000	400
Bonding wires 2	M-003 Aluminum and its alloys	0.697	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.697	mg	1000000	2112
Encapsulation	M-011 Other inorganic materials	158.533	mg	supplier	mold compound	Silica vitreous	60676-86-0		128.491	mg	810501	389367
				supplier	mold compound	Silicon oxide	7631-86-9		11.890	mg	75000	36030
				supplier	mold compound	Epoxy type resin	proprietary		11.890	mg	75000	36030
				supplier	mold compound	Phenol type resin	proprietary		4.756	mg	30000	14412
				supplier	mold compound	Carbon black	1333-86-4		0.872	mg	5500	2642
Connections coating	Solder	1.045	mg	supplier	mold compound	Bismuth compound	7440-69-9		0.634	mg	3999	1921
				supplier	solder alloy	Tin (Sn)	7440-31-5		1.045	mg	1000000	3167