STRIVE
FOR EXCELLENCE

Material declaration form

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

Supplier Information			
Company name*	STMicroelectronics	Response Date*	2023-04-14
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 : 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

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.

Signature Not
Verified

Digitally signed by
giovanni giacopello
Date: 2023.04.14
11:56:33 +02:00

Product				
Mfr item number	Mfr item name	Version	Manufacturing site	date
STGIK50CH65T2	IMFG*JKF5Y5I	A	993H	2023-04-14
	Amount	Unit of measure	Unit type	ST ECOPACK grade
	22320.00	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		
Not Applicable	Not Applicable	,		
Bulk solder termination	Terminal plating	Terminal base alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	DM00882088	
Package designator	Package size	Number of instances	Shape	
DSO	52.5x35.9x12.7	30	Through-hole	
Comment	SDIPHP-30L			

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	**true**
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)	false
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	false

Exemption Id.	Description

QueryList : ELV directive : 2000/53/EC amended 2020/363_March 2020	Response
1 - Product(s) meets EU ELV requirements without any exemptions	**true**
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	false

Exemption Id.	Description

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	4.870	die - leadframe - thermistor	218

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				true
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
,	#N/A			
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				true
CategoryLevel_Name	CategoryLevel_Threshold	Amount in embedded article / Homogeneous material (mg)	Application - article / Homogeneous material	ppm in article /Homogeneous material
,	#N/A		,	

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,**

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**	**IMFG*JKF5Y5I**					
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)**
IGBT	Other inorganic materials	19.102	mg	Supplier	Die	Silicon(Si)	7440-21-3		15.811	mg	827714	713
				Supplier	Metallization	Aluminium(Al)	7429-90-5		1.256	mg	65752	56
				Supplier	Passivation	Silicon Nitride	12033-89-5		0.299	mg	15653	13
				Supplier	Passivation	Silicon Oxide	7631-86-9		0.437	mg	22877	20
				Supplier	Back side metallization	Titanium (Ti)	7440-32-6		0.031	mg	1623	1
				Supplier	Back side metallization	Nickel (Ni)	7440-02-0		0.372	mg	19474	17
				Supplier	Back side metallization	Vanadium (V)	7440-62-2		0.028	mg	1466	1
				Supplier	Back side metallization	Silver (Ag)	7440-22-4		0.153	mg	8010	7
				Supplier	Polymer die coating	Durimide	Proprietary		0.715	mg	37431	32
FRD	Other inorganic materials	3.982	mg	Supplier	Die	Silicon(Si)	7440-21-3		3.793	mg	952537	170
				Supplier	Metallization	Aluminium(Al)	7429-90-5		0.063	mg	15821	3
				Supplier	Passivation	Silicon Oxide	7631-86-9		0.030	mg	7534	1
				Supplier	Back side metallization	Palladium (Pd)	7440-05-3		0.003	mg	753	0
				Supplier	Back side metallization	Titanium (Ti)	7440-32-6		0.003	mg	753	0
				Supplier	Back side metallization	Nickel (Ni)	7440-02-0		0.026	mg	6529	1
				Supplier	Back side metallization	Gold (Au)	7440-57-5		0.006	mg	1507	0
				Supplier	Polymer die coating	PIF	Proprietary		0.058	mg	14566	3
Boot-Di	Other inorganic materials	0.558	mg	Supplier	Die	Silicon(Si)	7440-21-3		0.501	mg	897850	22
				Supplier	Metallization	Aluminium(Al)	7429-90-5		0.019	mg	34050	1
				Supplier	Passivation	Silicon Oxide	7631-86-9		0.009	mg	16129	0
				Supplier	Back side metallization	Palladium (Pd)	7440-05-3		0.001	mg	1792	0
				Supplier	Back side metallization	Titanium (Ti)	7440-32-6		0.001	mg	1792	0
				Supplier	Back side metallization	Nickel (Ni)	7440-02-0		0.008	mg	14337	0
				Supplier	Back side metallization	Gold (Au)	7440-57-5		0.002	mg	3584	0
				Supplier	Polymer die coating	PIF	Proprietary		0.017	mg	30466	1
MIC-H	Other inorganic materials	3.758	mg	Supplier	Die	Silicon(Si)	7440-21-3		3.660	mg	973922	164
				Supplier	Metallization	Aluminium(Al)	7429-90-5		0.021	mg	5588	1
				Supplier	Passivation	Silicon Nitride	12033-89-5		0.027	mg	7185	1
				Supplier	Passivation	Silicon Oxide	7631-86-9		0.011	mg	2927	0
				Supplier	Polymer die coating	PIF	Proprietary		0.039	mg	10378	2
MIC-L	Other inorganic materials	7.665	mg	Supplier	Die	Silicon(Si)	7440-21-3		7.465	mg	973908	334
				Supplier	Metallization	Aluminium(Al)	7429-90-5		0.043	mg	5610	2
				Supplier	Passivation	Silicon Nitride	12033-89-5		0.055	mg	7175	2
				Supplier	Passivation	Silicon Oxide	7631-86-9		0.022	mg	2870	1
				Supplier	Polymer die coating	PIF	Proprietary		0.080	mg	10437	4
DBC	Other inorganic materials	2805.000	mg	Supplier	Alloy	Copper (Cu)	7440-50-8		1038.000	mg	370054	46505
				Supplier	Ceramic	Zirconium dioxide(ZTA)	1314-23-4		603.000	mg	214973	27016
				Supplier	Alloy	Copper (Cu)	7440-50-8		1164.000	mg	414973	52151
Lead frame	Copper & its alloys	4515.199	mg	Supplier	Alloy	Copper (Cu)	7440-50-8		4506.169	mg	998000	201889
				Supplier	Alloy	Iron (Fe)	7439-89-6		6.773	mg	1500	303
				Supplier	Alloy	Phosphorus (P)	7723-14-0		2.257	mg	500	101
Lead frame Ni plating	Nickel & its alloys	4.400	mg	Supplier	Plating	Nickel (Ni)	7440-02-0		4.400	mg	1000000	197
Lead frame Ag plating	Other Nonferrous metals & alloys	15.400	mg	Supplier	Plating	Silver (Ag)	7440-22-4		15.400	mg	1000000	690
Bonding wire(Al-Ni)	Aluminum & its alloys	63.390	mg	Supplier	Alloy	Aluminum (Al)	7429-90-5		63.387	mg	999953	2840
				Supplier	Alloy	Nickel (Ni)	7440-02-0		0.003	mg	47	0
Bonding wire(Al-Si)	Aluminum & its alloys	0.610	mg	Supplier	Alloy	Aluminum (Al)	7429-90-5		0.604	mg	990164	27
				Supplier	Alloy	Silicon (Si)	7440-21-3		0.006	mg	9836	0
Bonding wire(Au-Pd)	Other Nonferrous metals & alloys	1.829	mg	Supplier	Alloy	Gold (Au)	7440-57-5		1.811	mg	990159	81
				Supplier	Alloy	Palladium (Pd)	7440-05-3		0.018	mg	9841	1
Thermistor	Ceramics / Glass	2.675	mg	Supplier	Ceramic	Ceramic materials and wares, chemicals	66402-68-4		1.945	mg	727103	87
				Supplier	Glass	Silicon and its compounds	Proprietary		0.039	mg	14579	2
				Supplier	Glass	Barium and its compounds	Proprietary		0.020	mg	7477	1
				Supplier	Glass	Boron and its compounds	Proprietary		0.074	mg	27664	3
				Supplier	Glass	Aluminum and its compoundsMagnesium and it	Proprietary		0.043	mg	16075	2
				Supplier	Glass	Magnesium and its compounds	Proprietary		0.112	mg	41869	5
				Supplier	Glass	Alkaline-earth metals	Proprietary		0.009	mg	3364	0
				Supplier	Alloy	Silver (Ag)	7440-22-4		0.278	mg	103925	12
				Supplier	Alloy	Alkaline-earth metals	Proprietary		0.022	mg	8224	1
				Supplier	Plating	Nickel (Ni)	7440-02-0		0.061	mg	22804	3

				Supplier	Plating	Tin (Sn)	7440-31-5		0.072	mg	26916	3
Die attach Adhesive	Solder	88.000	mg	Supplier	Solder	Tin (Sn)	7440-31-5		84.920	mg	965000	3805
				Supplier	Solder	Silver (Ag)	7440-22-4		2.640	mg	30000	118
				Supplier	Solder	Copper (Cu)	7440-50-8		0.440	mg	5000	20
Die attach Adhesive 1	Other Organic Materials	2.500	mg	Supplier	Adhesive	Silver (Ag)	7440-22-4		2.175	mg	870000	97
				Supplier	Adhesive	Epoxy resin	Proprietary		0.325	mg	130000	15
Encapsulation	Other Organic Materials	14697.932	mg	Supplier	Mold compound	Silica, vitreous	60676-86-0		11758.343	mg	799999	526807
				Supplier	Mold compound	Phenol polymer with 3a,4,7,7a-tetrahydro-4,7-met	119345-05-0		698.149	mg	47500	31279
				Supplier	Mold compound	Phenol polymer with formaldehyde	9003-35-4		698.149	mg	47500	31279
				Supplier	Mold compound	4,4'-Bis(2,3-epoxypropoxy)-3,3',5,5'-tetramethyl(1	85954-11-6		698.149	mg	47500	31279
				Supplier	Mold compound	Carbon black	1333-86-4		146.993	mg	10001	6586
				Supplier	Mold compound	Carnauba wax and etc.	8015-86-9		698.149	mg	47500	31279
Lead finish	Other Nonferrous metals & alloys	88.000	mg	Supplier	Plating	Tin (Sn)	7440-31-5		88.000	mg	1000000	3943