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*	2024-11-08
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*	Antonella Lanzafame	Representative title	APMSMaterial 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
Antonella Lanzafame
Date: 2024.11.08
09:03:17 CET

Product				
Mfr item number	Mfr item name	Version	Manufacturing site	date
TSB181ILT	AYWY*UBHLAAA	A	ZS1A	2024-11-08
	Amount	Unit of measure	Unit type	ST ECOPACK grade
	16.38	mg	Each	ECOPACK® 3
Identity	**Authority**			
Comment	ECOPACK® 3 is STMicroelectronics trade name for ROHS compliant device without use of any ROHS exemption and without Halogen nor Antimony			

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	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy	0

Package designator	Package size	Number of instances	Shape	
SOT	2.9x1.6	5	gull wing	
Comment				
Comment	WY SOT 23-5			

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 17th Nov 2023			**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	0.091	alloy	5556
Lead	0.009	alloy	549

QueryList :Customer	**Response**
QUERY	**Response**

QueryList : Chinese RoHS , references : SJT 11364 – 2014 and GBT 26572 – 2014	**Response**
QUERY	**Response**
1 - Product(s) requires marking for the presence of restricted substances and must be marked with an Environmental Protection Use Period under China's Measures for Administration of the control of pollution by Electronic Information Products	false
2 - Product(s) is eligible for marking with the e code under China's Measures for Administration of the control of pollution by Electronic Information Products	false

Hazardous substance				
Lead (Pb)	**Cadmium (Cd)**	**Mercury (Hg)**	**Hexavalent Chromium (Cr VI)**	**PBB & PBDE**
X	O	O	O	O
Leadframe				
Homogeneous Material(s) containing Lead				

QueryList : REACH-27th June 2024				**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
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

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

QueryList:Stockholm Convention Persistent Organic Pollutants (POP)	**Response**
Product is compliant with Annex A, B and C of Stockholm Convention Persistent Organic Pollutants	true

QueryList: EU Ship Recycling Regulation No. 1257/2013	**Response**
Product contains hazardous materials listed in Annex II of EU Ship Recycling Regulation No.1257/2013 and 2009/16/EC Directive	True
The material present in the product is:	Lead

PFAS/PTFE Declaration	**Response**
The product is containing at least one of the following PFAS substance: Polytetrafluoroethylene,Thiophenium, Triphenylsulfonium nonaflate, Trifluoroacetic anhydride	False

BPA Declaration	**Response**
Product does not contain Bisphenol A (Isopropylidenediphenol)	True

Montreal Protocol	**Response**
Product does not contain Ozone Depleting Substances based on Annex I to Annex VII of EU REGULATION (EC) No 1005/2009	True

Environmental Protection Agency:Toxic Substances Control Act (TSCA). Section 6(h)	**Response**
Product does not contain Phenol, isopropylated, phosphate (3:1)	True

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						**Mfr Item Name**	**AYWY*UBHLAAA**		16.3786		4999861.0	999912.0
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)**
Die	M-011 Other inorganic materials	0.874	mg	supplier	die	Silicon(Si)	7440-21-3		0.811	mg	927918	49512
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.013	mg	14874	794
				supplier	metallisation	Copper(Cu)	7440-50-8		0.002	mg	2288	122
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.001	mg	1144	61
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.003	mg	3432	183
				supplier	passivation	Silicon oxide	7631-86-9		0.032	mg	36613	1954
				supplier	polymer coating	polyimide	proprietary		0.012	mg	13730	733
Leadframe	M-004 Copper and its alloys	7.200	mg	supplier	alloy	Copper (Min 97%)	7440-50-8		6.916	mg	960556	422222
				supplier	alloy	Phosphorus (0.015 ~ 0.150%)	7439-89-6		0.006	mg	833	366
				SVHC	alloy	lead	7439-92-1		0.009	mg	1250	549
				supplier	alloy	Iron (2.1 ~ 2.6%)	7723-14-0		0.169	mg	23472	10317
				supplier	alloy	Nickel plating (0.122 ~ 2.408%)	7440-66-6		0.091	mg	12639	5556
				supplier	alloy	Palladium (0.003 ~ 0.198%)	7440-22-4		0.007	mg	972	427
				supplier	alloy	Gold (0.002 ~ 0.032%)	7440-57-5		0.001	mg	139	61
Die attach	M-011 Other inorganic materials	0.043	mg	supplier	glue	Aluminium oxide (30 ~ 60%)	1344-28-1		0.019	mg	450000	1181
				supplier	glue	Ethyl acetate (10 ~ 30%)	112-15-2		0.009	mg	200000	525
				supplier	glue	Epoxy resin (10 ~ 30%)	Proprietary		0.008	mg	180000	473
				supplier	glue	Bisphenol A (epichlorhydrin), epoxy resin (1 ~ 10	25068-38-6		0.002	mg	55000	144
				supplier	glue	Dapsone (1 ~ 10%)	80-08-0		0.002	mg	55000	144
				supplier	glue	Silane, dichlorodimethyl-,reaction products with s	68611-44-9		0.002	mg	55000	144
				supplier	glue	Aminopropyltriethoxysilane (0.1 ~ 1%)	919-30-2		0.0002	mg	5000	13
Bonding wires	M-008 Precious metals	0.168	mg	supplier	wire	Gold (min 98.836%)	7440-57-5		0.166	mg	988500	10138
	0			supplier	wire	Palladium (max 1.15%)	7440-05-3		0.002	mg	11500	118
Encapsulation	M-011 Other inorganic materials	8.095	mg	supplier	mold compound	Solid Epoxy Resin-1 (0.1 ~ 11%)	Proprietary		0.163	mg	20162	9963
				supplier	mold compound	Solid Epoxy Resin-2 (0.1 ~ 11%)	Proprietary		0.163	mg	20162	9963
				supplier	mold compound	Phenol resin (2 ~ 12%)	Proprietary		0.323	mg	39953	19744
				supplier	mold compound	Amorphous Silica (85 ~ 95%)	60676-86-0		7.200	mg	889482	439560
				supplier	mold compound	Carbon Black (< 1%)	1333-86-4		0.041	mg	5040	2491
				supplier	mold compound	Crystalline silica (< 5%)	14808-60-7		0.204	mg	25202	12454