



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*	2024-11-11
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

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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
TSB181IYLT	AYWY*UBHLAAY	A	ZS1A	2024-11-11
	Amount	Unit of measure	Unit type	ST ECOPACK grade
	16	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	
DSO	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

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	
O	O	O	O	O	

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					true
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	False

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*UBHLAAY		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
				supplier	alloy	Copper (Min 97%)	7440-50-8		6.916	mg	960556	422222
Leadframe	M-004 Copper and its alloys	7.200	mg	supplier	alloy	Phosphorus (0.015 – 0.150%)	7439-89-6		0.006	mg	833	366
				supplier	alloy	Zinc (0.05 – 0.2%)	7440-66-6		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
				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
Die attach	M-011 Other inorganic materials	0.043	mg	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		0.000	mg	5000	13
				supplier	wire	Gold (min 98.836%)	7440-57-5		0.166	mg	988500	10138
				supplier	wire	Palladium (max 1.15%)	7440-05-3		0.002	mg	11500	118
				supplier	mold compound	Solid Epoxy Resin-1 (0.1 – 11%)	Proprietary		0.163	mg	20162	9963
Bonding wires	M-008 Precious metals	0.168	mg	supplier	mold compound	Solid Epoxy Resin-2 (0.1 – 11%)	Proprietary		0.323	mg	39953	19744
				supplier	mold compound	Phenol resin (2 – 12%)	Proprietary		7.200	mg	889482	439560
				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	Carbon Black (< 1%)	1333-86-4		0.041	mg	5040	2491
Encapsulation	M-011 Other inorganic materials	8.095	mg	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	Carbon Black (< 1%)	1333-86-4		0.041	mg	5040	2491
				supplier	mold compound	Carbon Black (< 1%)	1333-86-4		0.041	mg	5040	2491