



## 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*	2023-11-20
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*	Antoonella Lanzafame	Representative title	AMSMaterial 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**

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.			



Product				
Mfr item number	Mfr item name	Version	Manufacturing site	date
TSC201IST	ASE3*US5SAAA	A	Z9LA SC	2023-11-20
	Amount	Unit of measure	Unit type	ST ECOPACK grade
	28	mg	Each	ECOPACK® 3

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	Copper Alloy	,

Package designator	Package size	Number of instances	Shape	
ssop	3 x 4.9	8	gull wing	
Comment				
Comment	) E3 MSOP/TSSOP 8 BODY3.00 PITCH0.65			

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 11th Aug 2023			Response
1 - The product does not contain identified substance from California Prop 65 List, no exposure to consumers is foreseen			TRUE
2 - The product is containing below substance(s) from California Prop 65 List, no exposure to consumers is foreseen			FALSE
Substance	amount in product (mg)	Application	ppm in product

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-14th June 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
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 :	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

QueryList : EUSRR Directive	Response
Product contains hazardous materials listed in EUSRR Annex II	TRUE

PFAS/PTFE Restriction	Response
Product contains Per- and Polyfluorinated Substance	False

BPA Restriction	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	ASE3*USSSAAA		27.9995		5999685.0	999982.0
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	1.271	mg	supplier	die	Silicon(Si)	7440-21-3		1.187	mg	933616	42393
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.017	mg	13371	607
				supplier	metallisation	Copper(Cu)	7440-50-8		0.003	mg	2360	107
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.001	mg	787	36
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.005	mg	3933	179
				supplier	passivation	Silicon oxide	7631-86-9		0.040	mg	31461	1429
				supplier	polymer coating	polyimide	proprietary		0.018	mg	14158	643
Leadframe	M-004 Copper and its alloys	7.000	mg	supplier	alloy	Cu	7440-50-8		6.706	mg	958000	239500
				supplier	alloy	Si	7440-21-3		0.070	mg	10000	2500
				supplier	alloy	Ni	7440-02-0		0.175	mg	25000	6250
				supplier	alloy	Mg	7439-95-4		0.007	mg	1000	250
				supplier	alloy	Ag	7440-22-4		0.042	mg	6000	1500
				supplier	glue	Silver	7440-22-4		0.240	mg	800000	8571
Die attach	M-011 Other inorganic materials	0.300	mg	supplier	glue	Acrylate monomer	61434-04-6		0.042	mg	139000	1489
				supplier	glue	Acrylate oligomer	proprietary		0.015	mg	50000	536
				supplier	glue	Bismaleimide resin	proprietary		0.003	mg	10000	107
				supplier	glue	Epoxy resin	proprietary		0.0003	mg	1000	11
				supplier	wire	Au	7440-57-5		0.969	mg	1000000	34604
				supplier	mold compound	Epoxy Resin 1	proprietary		0.083	mg	5018	2950
Encapsulation	M-011 Other inorganic materials	16.460	mg	supplier	mold compound	Epoxy Resin 2	proprietary		0.083	mg	5018	2950
				supplier	mold compound	Epoxy Resin 3	proprietary		0.083	mg	5030	2957
				supplier	mold compound	Hardener	proprietary		0.331	mg	20122	11829
				supplier	mold compound	Catalyst	proprietary		0.017	mg	1006	591
				supplier	mold compound	Carbon black	1333-86-4		0.033	mg	2005	1179
				supplier	mold compound	Amorphous silica1	60676-86-0		15.664	mg	951654	559429
				supplier	mold compound	Amorphous silica2	7631-86-9		0.167	mg	10146	5964
Connections coating	Solder	2.000	mg	supplier	solder alloy	Tin(Sn)	7440-31-5		2.000	mg	1000000	71421