



## 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*	2023-11-29
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	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**

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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
TSC2011YST	ASE3*US5S1AY	A	Z9LA	2023-11-29
	Amount	Unit of measure	Unit type	ST ECOPACK grade
	28	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	Comment	
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	
SSOP	3 x 3	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
0	0	0	0	0

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
	#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



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
<b>QUERY</b>	<b>Response</b>
The product is containing at least one of the following PFAS substance: Polytetrafluoroethylene,Thiophenium, Triphenylsulfonium nonaflate, Trifluoroacetic anhydride	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*USSS1AY		28.0008		6000144.0	1000030.0
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	1.265	mg	supplier	die	Silicon(Si)	7440-21-3		1.174	mg	928063	41929
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.018	mg	14229	643
				supplier	metallisation	Copper(Cu)	7440-50-8		0.003	mg	2372	107
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.001	mg	791	36
				supplier	Passivation	Silicon nitride(SiN)	12033-89-6		0.004	mg	3162	143
				supplier	passivation	Silicon oxide	7631-86-9		0.047	mg	37154	1679
				supplier	polymer coating	polyimide	proprietary		0.018	mg	14229	643
Leadframe	M-004 Copper and its alloys	7.000	mg	supplier	alloy	Copper (Cu)	7440-50-8		6.790	mg	970000	242500
				supplier	alloy	Iron (Fe)	7439-89-6		0.158	mg	22571	5643
				supplier	alloy	Phosphorus (P)	7723-14-0		0.004	mg	571	143
				supplier	alloy	Zinc(Zn)	7440-66-6		0.007	mg	1000	250
				supplier	alloy	Silver(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		0.968	mg	999000	34573
Bonding wires	M-008 Precious metals #N/A	0.969	mg	supplier	wire	Other	proprietary		0.001	mg	1000	35
				supplier	wire	Other	proprietary		0.001	mg	1000	35
Encapsulation	M-011 Other inorganic materials	16.466	mg	supplier	mold compound	Epoxy Resin 1	proprietary		0.083	mg	5029	2957
				supplier	mold compound	Epoxy Resin 2	proprietary		0.083	mg	5029	2957
				supplier	mold compound	Epoxy Resin 3	proprietary		0.083	mg	5029	2957
				supplier	mold compound	Hardener	proprietary		0.331	mg	20114	11829
				supplier	mold compound	Catalyst	proprietary		0.017	mg	1006	591
				supplier	mold compound	Carbon black	1333-86-4		0.033	mg	2011	1183
				supplier	mold compound	Amorphous silica1	60676-86-0		15.638	mg	949715	558500
				supplier	mold compound	Amorphous silica2	7631-86-9		0.199	mg	12069	7097
Connections coating	Solder	2.000	mg	supplier	solder alloy	Tin(Sn)	7440-31-5		2.000	mg	1000000	71421