



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*	2024-10-22
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 : 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
TS3321YQ3T	ANK9*V393ABY	A	Z3NA	2024-10-22
	Amount	Unit of measure	Unit type	ST ECOPACK grade
	8	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	Tin (Sn), matte, annealed	Copper Alloy	0

Package designator	Package size	Number of instances	Shape
QFN	2x2	8	gull wing
Comment			
Comment	B045 WDFPN 2X2X0.8 8 P 0.5 WET FLK		

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				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	
Nickel	0.000	alloy	0	

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-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.	false

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	ANK9*V333ABY		8.0693		5999913.0	999917.0
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	0.410	mg	supplier	die	Silicon(Si)	7440-21-3		0.391	mg	953659	48451
	M-011 Other inorganic materials			California 65	die	Silicium carbide	409-21-2		0.000	mg	0	0
				supplier	die	Mica	12001-26-2		0.000	mg	0	0
				supplier	die	Gallium Arsenide	1303-00-0		0.000	mg	0	0
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.005	mg	12195	620
				supplier	metallisation	Aluminium nitride	24304-00-5		0.000	mg	0	0
				supplier	metallisation	Antimony(Sb)	7440-36-0		0.000	mg	0	0
				supplier	metallisation	Arsenic(As)	7440-38-2		0.000	mg	0	0
				supplier	metallisation	Bismuth(Bi)	7440-69-9		0.000	mg	0	0
				supplier	metallisation	Bore(B)	7440-42-8		0.000	mg	0	0
				supplier	metallisation	Chromium(Cr)	7440-47-3		0.000	mg	0	0
				supplier	metallisation	Copper(Cu)	7440-50-8		0.000	mg	0	0
				supplier	metallisation	Cobalt(Co)	7440-48-4		0.000	mg	0	0
				supplier	metallisation	Gallium nitride	25617-97-4		0.000	mg	0	0
				supplier	metallisation	Germanium(Ge)	7440-56-4		0.000	mg	0	0
				supplier	metallisation	GeSbTe	proprietary		0.000	mg	0	0
				supplier	metallisation	Gold(Au)	7440-57-5		0.000	mg	0	0
				supplier	metallisation	Iridium oxide	12030-49-8		0.000	mg	0	0
				supplier	metallisation	Iron(Fe)	7439-89-6		0.000	mg	0	0
				supplier	metallisation	Lanthane(La)	7439-91-0		0.000	mg	0	0
				supplier	metallisation	Lithium(Li)	7439-93-2		0.000	mg	0	0
				supplier	metallisation	Lithium cobalt oxide	12190-79-3		0.000	mg	0	0
				supplier	metallisation	Lithium phosphate	10377-52-3		0.000	mg	0	0
				supplier	metallisation	Manganese(Mn)	7439-96-5		0.000	mg	0	0
				supplier	metallisation	Molybdenum(Mo)	7439-98-7		0.000	mg	0	0
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.000	mg	0	0
				supplier	metallisation	Palladium(Pd)	7440-05-3		0.000	mg	0	0
				supplier	metallisation	Platinum(Pt)	7440-06-4		0.000	mg	0	0
				supplier	metallisation	Silver(Ag)	7440-22-4		0.000	mg	0	0
				supplier	metallisation	Tantalum(Ta)	7440-25-7		0.000	mg	0	0
				supplier	metallisation	Tin(Sn)	7440-31-5		0.000	mg	0	0
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.001	mg	2439	124
				supplier	metallisation	Tungsten(W)	7440-33-7		0.000	mg	0	0
				supplier	metallisation	Vanadium(V)	7440-62-2		0.000	mg	0	0
				supplier	metallisation	Zirconium(Zr)	7440-67-7		0.000	mg	0	0
				SVHC	Passivation	Lead(Pb)	7439-92-1		0.000	mg	0	0
				supplier	Passivation	Barium titanate	12047-27-7		0.000	mg	0	0
				supplier	Passivation	Hafniumoxide	12055-23-1		0.000	mg	0	0
				California 65	Passivation	Indium Tinoxide	50926-11-9		0.000	mg	0	0
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.001	mg	2439	124
				supplier	passivation	Silicon oxide	7631-86-9		0.012	mg	29268	1487
				supplier	passivation	Sapphire	1317-82-4		0.000	mg	0	0
				supplier	passivation	Strontium titanate	12060-59-2		0.000	mg	0	0
				SVHC	passivation	Lead Zirconate Titanate(PZT)	12626-81-2		0.000	mg	0	0
				supplier	glass	AluminiumOxide	1344-28-1		0.000	mg	0	0
				JIG-R & California 65	glass	Lead-BorateGlass	65997-18-4		0.000	mg	0	0
				supplier	glass	Borosilicateglass	65997-17-3		0.000	mg	0	0
				supplier	glass	Glass:PotassiumOxide	12136-45-7		0.000	mg	0	0
				supplier	glass	Glass:SodiumOxide	1313-59-3		0.000	mg	0	0
				supplier	glass	Quartz	14808-60-7		0.000	mg	0	0
				supplier	polymer coating	Polymer resist-Benzocyclobutene(BCB)	694-87-1		0.000	mg	0	0
				supplier	polymer coating	BCB	124221-30-3		0.000	mg	0	0
				supplier	polymer coating	PBOPolybenzoxazol	29791-96-6		0.000	mg	0	0
				supplier	polymer coating	Polymer resist-ASAHI	proprietary		0.000	mg	0	0
				supplier	polymer coating	Polymer resist(Blackresist))	proprietary		0.000	mg	0	0
				supplier	polymer coating	Polymer resist(color,planar,plens)	proprietary		0.000	mg	0	0
				supplier	polymer coating	Polymer resist(Glue)	proprietary		0.000	mg	0	0
				supplier	polymer coating	PVDC(polyvinylidenechloride)	9002-85-1		0.000	mg	0	0
				supplier	polymer coating	PolyimideAH1200	proprietary		0.000	mg	0	0

	0			supplier	wire	0			0.000	mg	0	0
Bonding wires 2	0	0.000	mg	supplier	wire	0			0.000	mg	0	0
	0			supplier	wire	0			0.000	mg	0	0
	0			supplier	wire	0			0.000	mg	0	0
	0			supplier	wire	0			0.000	mg	0	0
	0			supplier	wire	0			0.000	mg	0	0
	0			supplier	wire	0			0.000	mg	0	0
	0			supplier	wire	0			0.000	mg	0	0
	0			supplier	wire	0			0.000	mg	0	0
Bonding wires 3	0	0.000	mg	supplier	wire	0			0.000	mg	0	0
	0			supplier	wire	0			0.000	mg	0	0
	0			supplier	wire	0			0.000	mg	0	0
	0			supplier	wire	0			0.000	mg	0	0
	0			supplier	wire	0			0.000	mg	0	0
	0			supplier	wire	0			0.000	mg	0	0
	0			supplier	wire	0			0.000	mg	0	0
	0			supplier	wire	0			0.000	mg	0	0
Bonding Ribbons		0.000	mg	supplier	ribbon	0			0.000	mg	0	0
				supplier	ribbon	0			0.000	mg	0	0
				supplier	ribbon	0			0.000	mg	0	0
Underfill	M-015 Other organic materials	0.000	mg	supplier	resin	0			0.000	mg	0	0
				supplier	resin	0			0.000	mg	0	0
				supplier	resin	0			0.000	mg	0	0
				supplier	resin	0			0.000	mg	0	0
				supplier	resin	0			0.000	mg	0	0
				supplier	resin	0			0.000	mg	0	0
				supplier	resin	0			0.000	mg	0	0
				supplier	resin	0			0.000	mg	0	0
				supplier	resin	0			0.000	mg	0	0
				supplier	resin	0			0.000	mg	0	0
				supplier	resin	0			0.000	mg	0	0
				supplier	resin	0			0.000	mg	0	0
				supplier	resin	0			0.000	mg	0	0
				supplier	resin	0			0.000	mg	0	0
Encapsulation	M-011 Other inorganic materials	4.751	mg	supplier	mold compound	Epoxy Resin	Proprietary		0.302	mg	63492	37381
				supplier	mold compound	Phenol Resin	Proprietary		0.163	mg	34286	20186
				supplier	mold compound	Silica (Amorphous)A	60676-86-0		3.967	mg	834921	491561
				supplier	mold compound	Silica (Amorphous)B	7631-86-9		0.302	mg	63492	37381
				supplier	mold compound	Carbon Black	1333-86-4		0.018	mg	3810	2243
				supplier	mold compound				0.000	mg	0	0
				supplier	mold compound				0.000	mg	0	0
				supplier	mold compound				0.000	mg	0	0
				supplier	mold compound				0.000	mg	0	0
				supplier	mold compound				0.000	mg	0	0
				supplier	mold compound				0.000	mg	0	0
				supplier	mold compound				0.000	mg	0	0
				supplier	mold compound				0.000	mg	0	0
				supplier	mold compound				0.000	mg	0	0
BBB		0.000	mg	#N/A	to be defined				0.000	mg	0	0
				#N/A	to be defined				0.000	mg	0	0
				#N/A	to be defined				0.000	mg	0	0
				#N/A	to be defined				0.000	mg	0	0
solder paste	Solder	0.000	mg	supplier	solder				0.000	mg	0	0
				supplier	solder	0	0		0.000	mg	0	0
				supplier	solder	0	0		0.000	mg	0	0
				supplier	solder	0	0		0.000	mg	0	0
				supplier	solder	0	0		0.000	mg	0	0
				supplier	solder	0	0		0.000	mg	0	0
				supplier	solder	0	0		0.000	mg	0	0
				supplier	solder	0	0		0.000	mg	0	0
				supplier	solder	0	0		0.000	mg	0	0
				supplier	solder	0	0		0.000	mg	0	0
Connections coating	Solder	0.443	mg	supplier	solder alloy	Sn	7440-31-5		0.443	mg	100000	54932

Glue Nb3		0.000	mg	supplier	0	0	0		0.000	mg	0	0
				supplier	0	0	0		0.000	mg	0	0
				supplier	0	0	0		0.000	mg	0	0
				supplier	0	0	0		0.000	mg	0	0
				supplier	0	0	0		0.000	mg	0	0
				supplier	0	0	0		0.000	mg	0	0
				supplier	0	0	0		0.000	mg	0	0
				supplier	0	0	0		0.000	mg	0	0
				supplier	0	0	0		0.000	mg	0	0
				supplier	0	0	0		0.000	mg	0	0
				supplier	0	0	0		0.000	mg	0	0
				supplier	0	0	0		0.000	mg	0	0
				supplier	0	0	0		0.000	mg	0	0