



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*	2025-04-11
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*	MDG CHAMPION	Representative title	MDGMaterial 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
STM32N645Z0H3Q	E3DO*486XXXB	A	9991	2025-04-11
Amount	Unit of measure	Unit type	ST ECOPACK grade	
102	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL rating	Classification temperature	Number of reflow cycles		
3	260	3		
Bulk solder termination	Terminal plating	Terminal base alloy	Comment	
Not Applicable	Not Applicable	NAC	SACN305	
Package designator	Package size	Number of instances	Shape	
BGA	8x8	142	Bulk solder	
Comment	Package : B0GM FC VFBGA 8X8X1.0 142 P0.5 DM00762148			

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 : REACH-21st January 2025				Response
QUERY				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			



Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	ESDO*480XXB		101.5812		5000000.0	1000000.0
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 or dies	M-011 Other inorganic materials	5.000	mg	supplier	die	Silicon(Si)	7440-21-3		4.664	mg	932860	45916.98
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.003	mg	500	24.61
				supplier	metallisation	Arsenic(As)	7440-38-2		0.000	mg	4	0.20
				supplier	metallisation	Copper(Cu)	7440-50-8		0.249	mg	49763	2449.42
				supplier	metallisation	Cobalt(Co)	7440-48-4		0.000	mg	29	1.43
				supplier	metallisation	Silver(Ag)	7440-22-4		0.001	mg	196	9.65
				supplier	metallisation	Tantalum(Ta)	7440-25-7		0.003	mg	500	24.61
				supplier	metallisation	Tin(Sn)	7440-31-5		0.053	mg	10667	525.05
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.001	mg	108	5.32
				supplier	metallisation	Tungsten(W)	7440-33-7		0.003	mg	550	27.07
				supplier	Passivation	Silicon Nitride (SiN)	12033-89-5		0.007	mg	1399	68.86
				supplier	passivation	Silicon Oxide	7631-86-9		0.017	mg	3424	168.54
				supplier	Solder Mask	Acrylate resin	Proprietary		0.787	mg	30730	7743.76
				Substrate (A32506)	Copper & Resin	25.598	mg	supplier	Solder Mask	Acrylate monomer	Proprietary	
supplier	Solder Mask	Epoxy resin	Proprietary						0.229	mg	8934	2251.31
supplier	Solder Mask	Phthalocyanine blue	85954-11-6						0.004	mg	154	38.81
supplier	Solder Mask	Organic pigment	147-14-8						0.004	mg	154	38.81
supplier	Solder Mask	Barium sulfate	Proprietary						0.373	mg	14556	3668.02
supplier	Solder Mask	Talc containing no asbestiform fibers Talc	7727-43-7						0.059	mg	2311	582.36
supplier	Solder Mask	Silica, amorphous	14807-96-6						0.213	mg	8318	2096.08
supplier	Solder Mask	Aluminum hydroxide	7631-86-9						0.011	mg	416	104.83
supplier	Solder Mask	Phosphinoxide derivative	21645-51-2						0.072	mg	2819	710.37
supplier	Solder Mask	Amine compounds	Proprietary						0.035	mg	1386	349.26
supplier	Solder Mask	Aromatic Carbonyl Compound	Proprietary						0.059	mg	2311	582.36
supplier	PP	Thermosetting resin (Including filler)	Proprietary						5.017	mg	195981	49385.92
supplier	PP	Glass cloth	65997-17-3						3.344	mg	130654	32923.94
supplier	Cu foil (MT18FL-M)	Copper	7440-50-8						0.716	mg	27965	7047.00
supplier	Cu Plating	Copper plating	7440-50-8		14.549	mg	568382	143228.51				
Underfill (UA26)	Encapsulation Glue	1.500	mg	supplier	Underfill	p-(2,3-epoxypropoxy)-N, N-bis(2,3-epoxypropyl)am	5026-74-4		0.150	mg	100000	1476.65
				supplier	Underfill	Bisphenol F type liquid epoxy resin	9003-36-5		0.150	mg	100000	1476.65
				supplier	Underfill	Bisphenol A type liquid epoxy resin	25068-38-6		0.045	mg	30000	443.00
				supplier	Underfill	Amine type hardener	Proprietary		0.105	mg	70000	1033.66
				supplier	Underfill	Carbon black	1333-86-4		0.008	mg	5000	73.83
				supplier	Underfill	Silicon dioxide	60676-86-0		0.983	mg	655000	9672.07
Encapsulation (EME-G760-SW)	Molding Compound	54.636	mg	supplier	Underfill	Additives	Proprietary		0.060	mg	40000	590.66
				supplier	Molding compound	2,2'-((3,3',5,5'-Tetramethyl-(1,1'-biphenyl)-4,4'-di	85954-11-6		3.824	mg	70000	37649.60
				supplier	Molding compound	Phenol Resin A	9003-35-4		1.639	mg	30000	16135.54
				supplier	Molding compound	Phenol Resin B	Proprietary		1.639	mg	30000	16135.54
				supplier	Molding compound	Silica(Amorphous) A	60676-86-0		34.694	mg	635000	341535.67
				supplier	Molding compound	Silica(Amorphous) B	7631-86-9		10.927	mg	200000	107570.29
				supplier	Molding compound	Metal Hydroxide	Proprietary		1.639	mg	30000	16135.54
				supplier	Molding compound	Carbon Black	1333-86-4		0.273	mg	5000	2689.26
Solder balls (SACN305)	Other inorganic materials	14.848	mg	supplier	Solder Ball	Tin	7440-31-5		14.313	mg	964000	140904.90
				supplier	Solder Ball	Silver	7440-22-4		0.445	mg	30000	4385.01
				supplier	Solder Ball	Copper	7440-50-8		0.082	mg	5500	803.92
				supplier	Solder Ball	Nickel	7440-02-0		0.007	mg	500	73.08