



Material declaration form

General Information			
IPC	1752	Version	2
Form type*	Distribute		
Sectionals*	Material information	Subsectionals*	A-D
	Manufacturing information		

Supplier Information			
Company name*	STMicroelectronics	Response Date*	2025-04-03
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

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
STM32N645B0H3Q	E3DK*486XXXB	A	9991	2025-04-03
	Amount	Unit of measure	Unit type	ST ECOPACK grade
	166	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	10x10	198	Bulk solder	
Comment	Package : B0GJ FC VFBGA 10X10X1.0 198 P0.65 DM00762139			

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	E3DK*486XXB		166.0789		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	28084.85				
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.003	mg	500	15.05				
				supplier	metallisation	Arsenic(As)	7440-38-2		0.000	mg	4	0.12				
				supplier	metallisation	Copper(Cu)	7440-50-8		0.249	mg	49763	1498.17				
				supplier	metallisation	Cobalt(Co)	7440-48-4		0.000	mg	29	0.87				
				supplier	metallisation	Silver(Ag)	7440-22-4		0.001	mg	196	5.90				
				supplier	metallisation	Tantalum(Ta)	7440-25-7		0.003	mg	500	15.05				
				supplier	metallisation	Tin(Sn)	7440-31-5		0.053	mg	10667	321.14				
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.001	mg	108	3.25				
				supplier	metallisation	Tungsten(W)	7440-33-7		0.003	mg	550	16.56				
				supplier	Passivation	Silicon Nitride (SiN)	12033-89-5		0.007	mg	1399	42.12				
				supplier	passivation	Silicon Oxide	7631-86-9		0.017	mg	3424	103.08				
				supplier	Solder Mask	Plastics PAK	Proprietary		1.838	mg	45576	11064.58				
				Substrate (A32406)	Copper & Resin	40.319	mg	supplier	Solder Mask	Barium sulphate	7727-43-7		0.734	mg	18193	4416.75
supplier	Solder Mask	Plastic EP	Proprietary						0.472	mg	11696	2839.46				
supplier	Solder Mask	Silicon dioxide	7631-86-9						0.374	mg	9282	2253.41				
supplier	Solder Mask	Additives, not to declare	Proprietary						0.168	mg	4177	1014.06				
supplier	Solder Mask	Talc	14807-96-6						0.112	mg	2785	676.12				
supplier	Solder Mask	Pigment portion, not to declare	Proprietary						0.022	mg	557	135.22				
supplier	Solder Mask	Inorganic Ingredient, not to declare	Proprietary						0.022	mg	557	135.22				
supplier	PP	Thermosetting resin (including filler)	Proprietary						8.575	mg	212689	51634.93				
supplier	PP	Glass Cloth	65997-17-3						5.717	mg	141793	34423.37				
supplier	Cu foil	Copper	7440-50-8						1.890	mg	46881	11381.39				
supplier	Cu Plating	Copper	7440-50-8						20.394	mg	505814	122797.48				
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	903.19
								supplier	Underfill	Bisphenol F type liquid epoxy resin	9003-36-5		0.150	mg	100000	903.19
								supplier	Underfill	Bisphenol A type liquid epoxy resin	25068-38-6		0.045	mg	30000	270.96
				supplier	Underfill	Amine type hardener	Proprietary		0.105	mg	70000	632.23				
				supplier	Underfill	Carbon black	1333-86-4		0.008	mg	5000	45.16				
				supplier	Underfill	Silicon dioxide	60676-86-0		0.983	mg	655000	5915.86				
				supplier	Underfill	Additives	Proprietary		0.060	mg	40000	361.27				
Encapsulation (EME-G760-SW)	Molding Compound	70.190	mg	supplier	Molding compound	2,2'-((3,3',5,5'-Tetramethyl-1,1'-biphenyl)-4,4'-diyl)bis[4-phenylphenol]	85954-11-6		4.913	mg	70000	29583.96				
				supplier	Molding compound	Phenol Resin A	9003-35-4		2.106	mg	30000	12678.84				
				supplier	Molding compound	Phenol Resin B	Proprietary		2.106	mg	30000	12678.84				
				supplier	Molding compound	Silica(Amorphous) A	60676-86-0		44.570	mg	635000	268368.74				
				supplier	Molding compound	Silica(Amorphous) B	7631-86-9		14.038	mg	200000	84525.59				
				supplier	Molding compound	Metal Hydroxide	Proprietary		2.106	mg	30000	12678.84				
				supplier	Molding compound	Carbon Black	1333-86-4		0.351	mg	5000	2113.14				
Solder balls (SACN305)	Other inorganic materials	49.070	mg	supplier	Solder Ball	Tin	7440-31-5		47.303	mg	964000	284825.39				
				supplier	Solder Ball	Silver	7440-22-4		1.472	mg	30000	8863.86				
				supplier	Solder Ball	Copper	7440-50-8		0.270	mg	5500	1625.04				
				supplier	Solder Ball	Nickel	7440-02-0		0.025	mg	500	147.73				