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
STM32F446ZCJ7	5348*421XXXA	A	9996	2025-04-11
	Amount	Unit of measure	Unit type	ST ECOPACK grade
	108	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	
Tin - 3.5Ag	Not Applicable	NAC	0	
Package designator	Package size	Number of instances	Shape	
BGA	10x10	144	Bulk solder	
Comment	Package : A02Y UFBGA 10X10 144L P 0.8 MM 8526251			

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
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**	**5348*421XXXA**		108.4032		6000000.0	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	2.559	mg	supplier	die	Silicon (Si)	7440-21-3		2.385	mg	931916	21999
				supplier	metallization	Aluminium (Al)	7429-90-5		0.012	mg	4792	113
				supplier	metallization	Copper (Cu)	7440-50-8		0.079	mg	30947	731
				supplier	metallization	Cobalt (Co)	7440-48-4		0.000	mg	100	2
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.011	mg	4293	101
				supplier	metallization	Tungsten (W)	7440-33-7		0.036	mg	13876	328
				supplier	Passivation	Silicon Nitride	12033-89-5		0.009	mg	3594	85
				supplier	Passivation	Silicon Oxide	7631-86-9		0.027	mg	10482	247
Substrate (101424153)	Other organic materials	34.127	mg	supplier	CORE	Fibrous-Glass-Wool	65997-17-3		4.804	mg	140762	44315
				supplier	CORE	Formaldehyde Polymer with (Chloromethyl)Oxira	28906-96-9		1.223	mg	35829	11279
				supplier	CORE	Triazine	25722-66-1		1.223	mg	35829	11279
				supplier	CORE	Silicon dioxide	7631-86-9		2.989	mg	87581	27572
				supplier	COPPER FOIL	Copper (Cu)	7440-50-8		10.238	mg	300000	94446
				supplier	SOLDERMASK (AUS320)	Cured Resin	Proprietary		5.669	mg	166100	52291
				supplier	SOLDERMASK (AUS320)	Phthalocyanine Blue	147-14-8		0.015	mg	440	139
				supplier	SOLDERMASK (AUS320)	Organic Pigment	Proprietary		0.015	mg	440	139
				supplier	SOLDERMASK (AUS320)	Silica	Proprietary		0.038	mg	1100	346
				supplier	SOLDERMASK (AUS320)	Barium sulfate	7727-43-7		1.562	mg	45760	14406
				supplier	SOLDERMASK (AUS320)	Talc	14807-96-6		0.158	mg	4620	1454
				supplier	SOLDERMASK (AUS320)	Antifoamer and Leveling Agent	Proprietary		0.053	mg	1540	485
				supplier	NI PLATING	Nickel (Ni)	7440-02-0		5.585	mg	163637	51516
				supplier	AU PLATING	Gold (Au)	7440-57-5		0.558	mg	16362	5151
DAF (EM-760L2-P)	Other organic materials	0.418	mg	supplier	GLUE	Synthetic Rubber	Proprietary		0.167	mg	400000	1542
				supplier	GLUE	Amorphous Silica	7631-86-9		0.209	mg	500000	1928
				supplier	GLUE	Phenol Resin	Proprietary		0.042	mg	100000	386
Bonding Wire (Cu)	Other inorganic materials	0.763	mg	supplier	BONDING WIRE	Copper (Cu)	7440-50-8		0.740	mg	970500	6826
				supplier	BONDING WIRE	Palladium (Pd)	7440 05-3		0.021	mg	28000	197
				supplier	BONDING WIRE	Gold (Au)	7440-57-5		0.001	mg	1500	11
Solderballs (Sn3.5Ag)	Other inorganic materials	8.733	mg	supplier	SOLDERBALL	Tin (Sn)	7440-31-5		8.428	mg	965000	77743
				supplier	SOLDERBALL	Silver (Ag)	7440-22-4		0.306	mg	35000	2820
Encapsulation (G770FE)	Other organic materials	61.803	mg	supplier	MOLDING COMPOUND	Epoxy Resin A	Proprietary		1.854	mg	30000	17104
				supplier	MOLDING COMPOUND	Epoxy Resin B	1675-54-3		1.854	mg	30000	17104
				supplier	MOLDING COMPOUND	Phenol Resin	Proprietary		2.843	mg	46000	26226
				supplier	MOLDING COMPOUND	Silica(Amorphous) A	60676-86-0		44.746	mg	724000	412769
				supplier	MOLDING COMPOUND	Silica(Amorphous) B	7631-86-9		9.270	mg	150000	85519
				supplier	MOLDING COMPOUND	Aluminum Hydroxide	21645-51-2		0.927	mg	15000	8552
				supplier	MOLDING COMPOUND	Carbon Black	1333-86-4		0.309	mg	5000	2851