Materials Declaration Form

IPC	1752	Version	2
Form Type *	Distribute		
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D *** : Required Field***

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2023-12-07
Company Unique ID	NL 008751171B01		
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 *	Material Declaration champion	Representative Title	Material 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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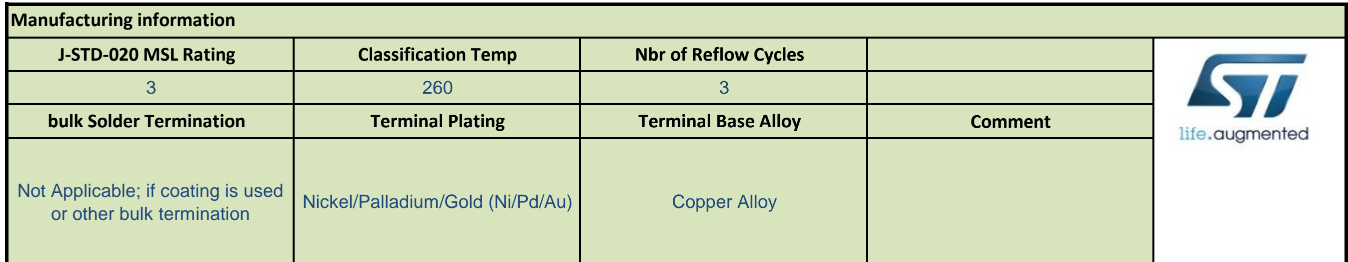
Legal Statement

Supplier Acceptance *	true	Legal Declaration *	Standard

Legal Statement

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 omprehensive 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	Mfr Site	Date
STM32L4S5VIT3	P81L*470XXXV	A	9998	2023-12-07
	Amount	UoM	Unit type	ST ECOPACK Grade
	681.44	mg	Each	ECOPACK® 2
.	Comment	ECOPACK® 2 is STMicroelectronics trade name for ROHS compliant device without Brominated and Chlorinated compound (900ppm) and without Antimony oxide flame retardant (in each organic material)		



Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
3	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable; if coating is used or other bulk termination	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFP	14x14	100	L bend	
Comment	Package : 1L LQFP 100 14x14x1.4 1 0086901			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 2015	
Query	**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-10 Jun 2022				
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

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	P81L*470XXXV				7000000.0	999998.6
Homogeneous Material	**Material Group**	**Mass**	**UoM**	**Level**	**Substance Category**	**Substance**	**CAS**	**Exempt**	**Mass**	**UoM**	**Concentration in homogeneous material (ppm)**	**Concentration in product (ppm)**
Die or dies	M-011 Other inorganic materials	24.190	mg	supplier	die	Silicon (Si)	7440-21-3		23.252	mg	961224	34122
				supplier	metallization	Aluminium (Al)	7429-90-5		0.045	mg	1860	66
				supplier	metallization	Copper (Cu)	7440-50-8		0.397	mg	16412	583
				supplier	metallization	Cobalt (Co)	7440-48-4		0.001	mg	41	1
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.129	mg	5333	189
				supplier	metallization	Titanium (Ti)	7440-32-6		0.005	mg	207	7
				supplier	metallization	Tungsten (W)	7440-33-7		0.003	mg	124	4
				supplier	Passivation	Silicon Nitride	12033-89-5		0.101	mg	4175	148
				supplier	Passivation	Silicon Oxide	7631-86-9		0.257	mg	10624	377
Leadframe (C194)	Copper and its alloy	153.152	mg	supplier	ALLOY	Copper (Cu)	7440-50-8	0.975	149.323	mg	975000	219129
				supplier	ALLOY	Iron (Fe)	7439-89-6	0.0235	3.599	mg	23500	5282
				supplier	ALLOY	Zinc (Zn)	7440-66-6	0.0012	0.184	mg	1200	270
				supplier	ALLOY	Metallic Phosphorus (P)	7723-14-0	0.0003	0.046	mg	300	67
External Plating (NiPdAu)	M-011 Other inorganic materials	5.255	mg	supplier	COATING	Nickel (Ni)	7440-02-0	0.97	5.097	mg	970000	7480
				supplier	COATING	Palladium (Pd)	7440-05-3	0.015	0.079	mg	15000	116
				supplier	COATING	Gold (Au)	7440-57-5	0.015	0.079	mg	15000	116
Glue epoxy (CRM-1076YB)	M-011 Other inorganic materials	0.967	mg	supplier	GLUE	Silver(Ag)	7440-22-4	0.7	0.677	mg	700000	993
				supplier	GLUE	Epoxy Resin A	9003-36-5	0.05	0.048	mg	50000	71
				supplier	GLUE	Silica fused (SiO2)	7631-86-9	0.1	0.097	mg	100000	142
				supplier	GLUE	Dicyandiamide	461-58-5	0.005	0.005	mg	5000	7
				supplier	GLUE	Diluent	3101-60-8	0.05	0.048	mg	50000	71
				supplier	GLUE	Allyl Compound	Proprietary	0.05	0.048	mg	50000	71
				supplier	GLUE	Hardener	Proprietary	0.045	0.044	mg	45000	64
Bonding wire (Au)	M-011 Other inorganic materials	1.749	mg	supplier	BONDING WIRE	Gold (Au)	7440-57-5	0.99048	1.732	mg	990480	2542
				supplier	BONDING WIRE	Palladium (Pd)	7440-05-3	0.0095	0.017	mg	9500	24
				supplier	BONDING WIRE	Calcium (Ca)	7440-70-2	0.00002	0.000	mg	20	0
Encapsulation (G631H Type Q)	M-011 Other inorganic materials	490.262	mg	supplier	MOLDING COMPOUND	Epoxy Resin A	Proprietary	0.02	9.805	mg	20000	14389
				supplier	MOLDING COMPOUND	Epoxy Resin B	85954-11-6	0.04	19.610	mg	40000	28778
				supplier	MOLDING COMPOUND	Silica Amorphous A	60676-86-0	0.785	384.856	mg	785000	564768
				supplier	MOLDING COMPOUND	Silica Amorphous B	7631-86-9	0.085	41.672	mg	85000	61153
				supplier	MOLDING COMPOUND	Carbon Black	1333-86-4	0.005	2.451	mg	5000	3597
				supplier	MOLDING COMPOUND	Phenol Resin	Proprietary	0.065	31.867	mg	65000	46764
Finishing (NiPdAu)	M-011 Other inorganic materials	5.865	mg	supplier	COATING	Nickel (Ni)	7440-02-0	0.97	5.689	mg	970000	8349
				supplier	COATING	Palladium (Pd)	7440-05-3	0.015	0.088	mg	15000	129
				supplier	COATING	Gold (Au)	7440-57-5	0.015	0.088	mg	15000	129