Materials Declaration Form

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

Supplier Information			
Company Name *	STMicroelectronics	**Response Date ***	28-02-2020
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 *	MDG MD CHAMPION	**Representative Title**	MDG MD 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.		

Signature Not
Verified

Digitally signed by
MDF Champion
Date: 2020.02.28
10:15:56 +08:00

Product

Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32F103VDT7	EK1L*414XXX2	A	9991	28-02-2020
	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	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
LQFP	14X14X1.4	144		
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-16th July 2019	
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**	**EK1L*414XXX2**					6000001.0	1000001.8
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	3.501	mg	supplier	die	Silicon (Si)	7440-21-3		2.744	mg	783776	4027	
				supplier	metallization	Aluminium (Al)	7429-90-5		0.051	mg	14567	75	
				supplier	metallization	Copper (Cu)	7440-50-8		0.257	mg	73408	377	
				supplier	metallization	Cobalt (Co)	7440-48-4		0.048	mg	13710	70	
				supplier	metallization	Titanium (Ti)	7440-32-6		0.014	mg	3999	21	
				supplier	metallization	Tungsten (W)	7440-33-7		0.028	mg	7998	41	
				supplier	Passivation	Silicon Nitride	12033-89-5		0.034	mg	9712	50	
				supplier	Passivation	Silicon Oxide	7631-86-9		0.325	mg	92831	477	
Leadframe LF# A25516		185.540	mg		Leadframe	Copper (Cu)	7440-50-8		175.150	mg	944000	257029	
					Leadframe	Silver (Ag)	7440-22-4		2.783	mg	15000	4084	
					Leadframe	Magnesium (Mg)	7439-95-4		0.325	mg	1750	476	
					Leadframe	Silicon (Si)	7440-21-3		1.345	mg	7250	1974	
					Leadframe	Nickel (Ni)	7440-02-0		5.937	mg	32000	8713	
Glue (CRM 1076WA)		3.500	mg		Glue or tape	Silver Powder	7440-22-4		2.639	mg	754000	3873	
					Glue or tape	Bisphenol F Type Epoxy Resin	9003-36-5		0.105	mg	30000	154	
					Glue or tape	Epoxy resin	Trade Secret		0.245	mg	70000	360	
					Glue or tape	Diluent	Trade Secret		0.088	mg	25000	128	
					Glue or tape	Ethylene dimethacrylate	97-90-5		0.280	mg	80000	411	
					Glue or tape	1,4-Cyclohexanedimethanol diglycidyl ether	14228-73-0		0.105	mg	30000	154	
					Glue or tape	Dicyandiamide	461-58-5		0.019	mg	5500	28	
					Glue or tape	1,1-Di(t-butylperoxy)cyclohexane	3006-86-8		0.019	mg	5500	28	
Bonding wire (Au 0.8 mils)		1.600	mg		Bonding wire	Au	7440-57-5		1.582	mg	988500	2321	
					Bonding wire	Pd	7440-05-3		0.018	mg	11500	27	
Encapsulation (Sumitomo,EME-G631SH)		466.400	mg		Molding Compound	Epoxy Resin A	Proprietary		9.328	mg	20000	13689	
					Molding Compound	Epoxy Resin B	Proprietary		9.328	mg	20000	13689	
					Molding Compound	Phenol Resin	Proprietary		25.652	mg	55000	37644	
					Molding Compound	Carbon Black	1333-86-4		2.565	mg	5500	3764	
					Molding Compound	Silica(Amorphous) A	60676-86-0		349.567	mg	749500	512983	
					Molding Compound	Silica(Amorphous) B	7631-86-9		69.960	mg	150000	102665	
External Plating		20.900	mg		Matte Sn	Tin (Sn)	7440-57-5		20.898	mg	999900	30667	
					Matte Sn	Impurities	7440-05-3		0.002	mg	100	3	