



Materials Declaration Form

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


Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2017-03-22
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	LAURENT TOSI	Representative Title	MDG MD CHAMPION
Representative Phone *	33 442 685 795	Representative Email *	laurent.tosi@st.com
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/web/en/support/support.html		

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Legal Statement			
Supplier Acceptance *	true	Legal Declaration *	Standard
Legal Statement	<p>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.</p>		

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32L452VET6	P01L*462XXXY	A	9998	2017-03-22
	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		 life.augmented
3	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable ; if coating is used or other bulk termination : add in comments	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

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

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-12th January 2017				
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	P01L*462XXY					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	Other inorganic materials	11.371	mg	supplier	die	Silicon (Si)	7440-21-3		10.947	mg	962712	16065
				supplier	metallization	Aluminium (Al)	7429-90-5		0.020	mg	1759	29
				supplier	metallization	Copper (Cu)	7440-50-8		0.180	mg	15830	264
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.058	mg	5101	85
				supplier	metallization	Titanium (Ti)	7440-32-6		0.002	mg	176	3
				supplier	metallization	Tungsten (W)	7440-33-7		0.002	mg	176	3
				supplier	Passivation	Silicon Nitride	12033-89-5		0.046	mg	4045	68
				supplier	Passivation	Silicon Oxide	7631-86-9		0.116	mg	10201	170
LEADFRAME (HaesungDS - C194)	Other inorganic materials	143.653	mg	supplier	ALLOY	Copper (Cu)	7440-50-8		139.989	mg	974500	205432
				supplier	ALLOY	Iron (Fe)	7439-89-6		3.448	mg	24000	5059
				supplier	ALLOY	Zinc (Zn)	7440-66-6		0.172	mg	1200	253
				supplier	ALLOY	Metallic Phosphorous (P)	7723-14-0		0.043	mg	300	63
				supplier	COATING	Nickel (Ni)	7440-02-0		4.431	mg	975400	6502
LEADFRAME (HaesungDS - uPPF Plating)	Other inorganic materials	4.542	mg	supplier	COATING	Palladium (Pd)	7440-05-3		0.094	mg	20700	138
				supplier	COATING	Gold (Au)	7440-57-5		0.010	mg	2200	15
				supplier	COATING	Silver(Ag)	7440-22-4		0.008	mg	1700	11
				supplier	GLUE	Silver(Ag)	7440-22-4		1.292	mg	700000	1895
DIE ATTACH (Sumitomo - 1076YB)	Other inorganic materials	1.845	mg	supplier	GLUE	Epoxy Resin A	9003-36-5		0.092	mg	50000	135
				supplier	GLUE	Silica fused (SiO2)	7631-86-9		0.185	mg	100000	271
				supplier	GLUE	Dicyandiamide	461-58-5		0.009	mg	5000	14
				supplier	GLUE	Diluent	3101-60-8		0.092	mg	50000	135
				supplier	GLUE	Allyl Compound	Trade Secret		0.092	mg	50000	135
				supplier	GLUE	Hardener	Trade Secret		0.083	mg	45000	122
				supplier	BONDING WIRE	Gold (Au)	7440-57-5		1.519	mg	990060	2229
BONDING WIRE (MKE - Au HTS Wire)	Other inorganic materials	1.534	mg	supplier	BONDING WIRE	Calcium (Ca)	7440-70-2		0.000	mg	40	0
				supplier	BONDING WIRE	Palladium (Pd)	7440-05-3		0.015	mg	9900	22
				supplier	MOLDING COMPOUND	Epoxy Resin A	Trade secret		15.553	mg	30025	22823
				supplier	MOLDING COMPOUND	Epoxy resin B	85954-11-6		36.290	mg	70057	53254
ENCAPSULATION (Sumitomo -G631H)	Other inorganic materials	518.000	mg	supplier	MOLDING COMPOUND	Silica fused (SiO3)	60676-86-0		435.052	mg	839869	638430
				supplier	MOLDING COMPOUND	Carbon Black	1333-86-4		2.592	mg	5004	3804
				supplier	MOLDING COMPOUND	Phenol Resin	Trade Secret		28.513	mg	55045	41843
				supplier	COATING	Nickel (Ni)	7440-02-0		0.437	mg	882600	641
FINISHING (HaesungDS - uPPF Plating)	Other inorganic materials	0.495	mg	supplier	COATING	Palladium (Pd)	7440-05-3		0.026	mg	52400	38
				supplier	COATING	Gold (Au)	7440-57-5		0.018	mg	36399	26
				supplier	COATING	Silver(Ag)	7440-22-4		0.014	mg	28601	21
				supplier	COATING	Silver(Ag)	7440-22-4		0.014	mg	28601	21