


Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32F401VBT6 STM32F401VBT6TR	P21L*423XXX1	A	9998	16-02-2018
	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	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 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-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	P21L*423XX1				6000000.0	1000000.0
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	13.206	mg	supplier	die	Silicon (Si)	7440-21-3		12.541	mg	949644	18404
				supplier	metallization	Aluminium (Al)	7429-90-5		0.047	mg	3559	69
				supplier	metallization	Copper (Cu)	7440-50-8		0.302	mg	22868	443
				supplier	metallization	Cobalt (Co)	7440-48-4		0.001	mg	76	1
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.042	mg	3180	62
				supplier	metallization	Tungsten (W)	7440-33-7		0.136	mg	10298	200
				supplier	Passivation	Silicon Nitride	12033-89-5		0.035	mg	2650	51
				supplier	Passivation	Silicon Oxide	7631-86-9		0.102	mg	7724	150
				supplier	ALLOY	Copper (Cu)	7440-50-8		127.215	mg	958334	186686
				supplier	ALLOY	Chromium (Cr)	7440-47-3		0.385	mg	2900	565
LEADFRAME	M-011 Other inorganic materials	132.746	mg	supplier	ALLOY	Tin (Sn)	7440-31-5		0.320	mg	2411	470
				supplier	ALLOY	Zinc (Zn)	7440-66-6		0.256	mg	1928	376
				supplier	COATING	Nickel (Ni)	7440-02-0		4.431	mg	33380	6502
				supplier	COATING	Palladium (Pd)	7440-05-3		0.094	mg	708	138
				supplier	COATING	Gold (Au)	7440-57-5		0.045	mg	339	66
				supplier	GLUE	Silver(Ag)	7440-22-4		1.315	mg	700213	1930
				supplier	GLUE	Epoxy resin A	9003-36-5		0.047	mg	25027	69
				supplier	GLUE	Epoxy resin B	Proprietary		0.094	mg	50053	138
				supplier	GLUE	Allyl compound	Proprietary		0.150	mg	79872	220
				supplier	GLUE	Silica	Proprietary		0.141	mg	75080	207
BONDING WIRE	M-011 Other inorganic materials	1.534	mg	supplier	BONDING WIRE	Diluent	Proprietary		0.131	mg	69755	192
				supplier	BONDING WIRE	Gold (Au)	7440-57-5		1.519	mg	990222	2229
				supplier	BONDING WIRE	Palladium (Pd)	7440-05-3		0.015	mg	9778	22
ENCAPSULATION	M-011 Other inorganic materials	531.317	mg	supplier	MOLDING COMPOUND	Epoxy resin	Proprietary		53.599	mg	100880	78655
				supplier	MOLDING COMPOUND	Silica (SiO3)	60676-86-0		445.559	mg	838594	653849
				supplier	MOLDING COMPOUND	Carbon Black	1333-86-4		2.680	mg	5044	3933
FINISHING	M-011 Other inorganic materials	0.759	mg	supplier	MOLDING COMPOUND	Phenol Resin	Proprietary		29.479	mg	55483	43260
				supplier	CONNECTION COATING	Nickel (Ni)	7440-02-0		0.739	mg	973650	1084
				supplier	CONNECTION COATING	Palladium (Pd)	7440-05-3		0.016	mg	21080	23
				supplier	CONNECTION COATING	Gold (Au)	7440-57-5		0.004	mg	5270	6