



Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32F105VCT6V	P81L*418XXXZ	A	9998	2017-07-11
	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	P81L*418XXZ				6000001.0	0.0
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	17.271	mg	supplier	die	Silicon (Si)	7440-21-3		16.566	mg	959180	24310
				supplier	metallization	Aluminium (Al)	7429-90-5		0.048	mg	2779	70
				supplier	metallization	Copper (Cu)	7440-50-8		0.239	mg	13838	351
				supplier	metallization	Cobalt (Co)	7440-48-4		0.045	mg	2606	66
				supplier	metallization	Titanium (Ti)	7440-32-6		0.013	mg	753	19
				supplier	metallization	Tungsten (W)	7440-33-7		0.026	mg	1505	38
				supplier	Passivation	Silicon Nitride	12033-89-5		0.031	mg	1795	45
				supplier	Passivation	Silicon Oxide	7631-86-9		0.303	mg	17544	445
				supplier	ALLOY	Copper (Cu)	7440-50-8		147.008	mg	945839	215731
LEADFRAME	M-011 Other inorganic materials	155.426	mg	supplier	ALLOY	Iron (Fe)	7439-89-6		3.621	mg	23297	5314
				supplier	ALLOY	Phosphorous (P)	7723-14-0		0.045	mg	290	66
				supplier	ALLOY	Zinc (Zn)	7440-66-6		0.181	mg	1165	266
				supplier	COATING	Nickel (Ni)	7440-02-0		4.431	mg	28509	6502
				supplier	COATING	Palladium (Pd)	7440-05-3		0.094	mg	605	138
				supplier	COATING	Gold (Au)	7440-57-5		0.046	mg	296	68
DIE ATTACH	M-011 Other inorganic materials	2.904	mg	supplier	GLUE	Silver (Ag)	7440-22-4		2.033	mg	700069	2983
				supplier	GLUE	Silica	Proprietary		0.436	mg	150138	640
				supplier	GLUE	Epoxy resin A	9003-36-5		0.087	mg	29959	128
				supplier	GLUE	Epoxy resin B	Proprietary		0.145	mg	49931	213
				supplier	GLUE	Diluent	Proprietary		0.145	mg	49931	213
				supplier	GLUE	Hardener	Proprietary		0.058	mg	19972	85
BONDING WIRE	M-011 Other inorganic materials	1.534	mg	supplier	BONDING WIRE	Gold (Au)	7440-57-5		1.533	mg	999348	2250
				supplier	BONDING WIRE	Palladium (Pd)	7440-05-3		0.001	mg	652	1
ENCAPSULATION	M-011 Other inorganic materials	503.546	mg	supplier	MOLDING COMPOUND	Epoxy resin	Proprietary		49.860	mg	100637	73169
				supplier	MOLDING COMPOUND	Silica fused (SiO2)	60676-86-0		423.770	mg	838981	-378125
				supplier	MOLDING COMPOUND	Phenol Resin	Proprietary		27.423	mg	55350	40243
FINISHING	M-011 Other inorganic materials	0.759	mg	supplier	MOLDING COMPOUND	Carbon Black	1333-86-4		2.493	mg	5032	3658
				supplier	COATING	Nickel (Ni)	7440-02-0		0.739	mg	973650	1084
				supplier	COATING	Palladium (Pd)	7440-05-3		0.016	mg	21080	23
				supplier	COATING	Gold (Au)	7440-57-5		0.004	mg	5270	6