




Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32F745VET6	P41L*449XXXZ	A	9998	2018-03-04
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	
NAC	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 :						Mfr Item Name	P41L*449XXZ				6000000.0	0.0
note : Substance present with less 0.001mg will not be declared in this document												
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	24.764	mg	supplier	die	Silicon (Si)	7440-21-3		23.516	mg	949604	34509
				supplier	metallization	Aluminium (Al)	7429-90-5		0.087	mg	3513	128
				supplier	metallization	Copper (Cu)	7440-50-8		0.567	mg	22896	832
				supplier	metallization	Cobalt (Co)	7440-48-4		0.002	mg	81	3
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.079	mg	3190	116
				supplier	metallization	Tungsten (W)	7440-33-7		0.255	mg	10297	374
				supplier	Passivation	Silicon Nitride	12033-89-5		0.066	mg	2665	97
LEADFRAME (HDS- C194 uPPF)	M-011 Other inorganic materials	157.546	mg	supplier	Passivation	Silicon Oxide	7631-86-9		0.192	mg	7753	282
				supplier	ALLOY	Copper (Cu)	7440-50-8		153.529	mg	974503	225301
				supplier	ALLOY	Iron (Fe)	7439-89-6		3.781	mg	23999	5549
				supplier	ALLOY	Zinc (Zn)	7440-66-6		0.189	mg	1200	277
				supplier	ALLOY	Phosphorus (P)	7723-14-0		0.047	mg	298	69
LEADFRAME (HDS - PPF)	M-011 Other inorganic materials	5.330	mg	supplier	COATING	Nickel (Ni)	7440-02-0		5.170	mg	969981	7587
				supplier	COATING	Palladium (Pd)	7440-05-3		0.110	mg	20638	161
				supplier	COATING	Gold (Au)	7440-57-5		0.050	mg	9381	73
DIE ATTACH (Sumitomo - CRM - 1076)	M-011 Other inorganic materials	2.992	mg	supplier	GLUE	Epoxy resin A	9003-36-5		0.150	mg	50134	220
				supplier	GLUE	Epoxy resin B	Proprietary		0.404	mg	135027	593
				supplier	GLUE	Silver(Ag)	7440-22-4		2.094	mg	699866	3073
				supplier	GLUE	Silica	Proprietary		0.299	mg	99933	439
				supplier	GLUE	Hardener	Proprietary		0.045	mg	15040	66
BONDING WIRE (MKE - HTS Au 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)	7440-41-7		0.001	mg	652	1
ENCAPSULATION (Sumitomo -G631H)	M-011 Other inorganic materials	489.274	mg	supplier	MOLDING COMPOUND	Epoxy Resin	Proprietary		49.052	mg	100255	71983
				supplier	MOLDING COMPOUND	Silica fused (SiO3)	60676-86-0		410.790	mg	839591	-397174
				supplier	MOLDING COMPOUND	Phenol Resin	Proprietary		2.453	mg	5014	3600
				supplier	MOLDING COMPOUND	Carbon Black	1333-86-4		26.979	mg	55141	39591