




Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32F746NEH6	P4RM*449XXXZ	a	9996	13-12-2017
	Amount	UoM	Unit type	ST ECOPACK Grade
	262.52	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	
Tin/Silver/Copper (SAC105)	NAC	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
BGA	13x13x1.2	216	No lead	
Comment	Package : A0L2 TFBGA 13X13X1.2 216L P 0.8 MM 8373526			

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	P4RM*449XXXZ				10000000.0	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	12.535	mg	supplier	die	Silicon (Si)	7440-21-3		11.287	mg	900439	42995
				supplier	metallization	Aluminium (Al)	7429-90-5		0.087	mg	6941	331
				supplier	metallization	Copper (Cu)	7440-50-8		0.567	mg	45233	2160
				supplier	metallization	Cobalt (Co)	7440-48-4		0.002	mg	160	8
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.079	mg	6302	301
				supplier	metallization	Tungsten (W)	7440-33-7		0.255	mg	20343	971
				supplier	Passivation	Silicon Nitride	12033-89-5		0.066	mg	5265	251
				supplier	Passivation	Silicon Oxide	7631-86-9		0.192	mg	15317	731
SUBSTRATE (DS-7409HGB) Core	M-011 Other inorganic materials	69.300	mg	supplier	CORE	Organic resin	Proprietary		15.939	mg	230000	60715
				supplier	CORE	Other inorganic filler	Proprietary		18.018	mg	260000	68635
				supplier	CORE	Glass fiber	65997-17-3		35.343	mg	510000	134630
SUBSTRATE (DS-7409HGB) Solder Mask	M-011 Other inorganic materials	16.900	mg	supplier	SOLDERMASK	Organic resin	Proprietary		10.985	mg	650000	41844
				supplier	SOLDERMASK	Inorganic filler	Proprietary		5.915	mg	350000	22532
SUBSTRATE (DS-7409HGB) Cu Foil	M-011 Other inorganic materials	19.500	mg	supplier	CU FOIL	Copper (Cu)	7440-50-8		19.500	mg	1000000	74280
SUBSTRATE (DS-7409HGB) Ni Plating	M-011 Other inorganic materials	5.700	mg	supplier	NI PLATING	Nickel (Ni)	7440-02-0		5.700	mg	1000000	21713
SUBSTRATE (DS-7409HGB) Au Plating	M-011 Other inorganic materials	1.000	mg	supplier	AU PLATING	Gold (Au)	7440-57-5		1.000	mg	1000000	3809
DIE ATTACH (2300)	M-011 Other inorganic materials	1.699	mg	supplier	GLUE	Epoxy resin	Proprietary		0.374	mg	219999	1424
				supplier	GLUE	Filler (Ag)	7440-22-4		1.325	mg	780001	5048
BONDING WIRE (MKE Au HP )	M-011 Other inorganic materials	4.228	mg	supplier	BONDING WIRE	Gold (Au)	7440-57-5		4.228	mg	1000000	16106
SOLDERBALL (Sn0.985Ag0.01Cu0.005)	M-011 Other inorganic materials	35.598	mg	supplier	SOLDERBALL	Tin (Sn)	7440-31-5		35.064	mg	984999	133567
				supplier	SOLDERBALL	Silver (Ag)	7440-22-4		0.356	mg	10001	1356
				supplier	SOLDERBALL	Copper (Cu)	7440-50-8		0.178	mg	5000	678
ENCAPSULATION (GE-100LFCS)	M-011 Other inorganic materials	96.060	mg	supplier	MOLDING COMPOUND	Silica fused (SiO2)	60676-86-0		11.191	mg	119597	42629
				supplier	MOLDING COMPOUND	Epoxy resin	Proprietary		84.869	mg	880403	-676714