




Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32F417IEH6	P5MR*413XXX2	A	9996	14-02-2018
	Amount	UoM	Unit type	ST ECOPACK Grade
	110.10	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	
SOLDERBALL (Sn96.5Ag3.5)	NAC	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
BGA	10,10,0.6	201	No lead	
Comment	Package : A0E7 UFBGA 10X10X0.6 176+25 P0.65 8249558			

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	P5MR*413XXX2				5999999.0	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	3.556	mg	supplier	die	Silicon (Si)	7440-21-3		2.979	mg	837739	27057				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.028	mg	7874	254				
				supplier	metallization	Copper (Cu)	7440-50-8		0.244	mg	68616	2216				
				supplier	metallization	Cobalt (Co)	7440-48-4		0.001	mg	281	9				
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.079	mg	22216	718				
				supplier	metallization	Titanium (Ti)	7440-32-6		0.003	mg	844	27				
				supplier	metallization	Tungsten (W)	7440-33-7		0.002	mg	562	18				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.062	mg	17435	563				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.158	mg	44432	1435				
				SUBSTRATE (DS7409HGB)	M-011 Other inorganic materials	36.638	mg	supplier	CORE	Glass Cloth	65997-17-3		2.114	mg	57700	19201
supplier	CORE	Epoxy resin	61788-97-4						0.381	mg	10400	3461				
supplier	CORE	Flame resistant epoxy resin	223769-10-6						0.337	mg	9200	3061				
supplier	CORE	Heat resistant resin	25722-66-1						0.337	mg	9200	3061				
supplier	CORE	Silica filler	7631-86-9						0.802	mg	21900	7288				
supplier	CORE	Metal Hydroxide	Proprietary						0.634	mg	17300	5757				
supplier	CORE	Copper foil	7440-50-8						3.847	mg	105000	34941				
supplier	SOLDERMASK (AUS308)	Talc containing no asbestiform fibers	14807-96-6						0.300	mg	8200	2729				
supplier	SOLDERMASK (AUS308)	Barium sulfate	7727-43-7						5.027	mg	137200	45656				
supplier	SOLDERMASK (AUS308)	Dipropylene glycol monomethyl ether	34590-94-8						2.026	mg	55300	18402				
supplier	SOLDERMASK (AUS308)	Napthalene	91-20-3						0.769	mg	21000	6988				
supplier	SOLDERMASK (AUS308)	Morpholine derivative	Proprietary						0.843	mg	23000	7653				
supplier	CU PLATING	Copper (Cu)	7440-50-8						13.036	mg	355800	118399				
supplier	NI PLATING	Nickel (Ni)	7440-02-0						5.400	mg	147400	49050				
supplier	AU PLATING	Gold (Au)	7440-57-5						0.784	mg	21400	7121				
DIE ATTACH (ATB-130U)	M-011 Other inorganic materials	0.432	mg					supplier	GLUE	Butadiene,acrylonitrile polymer,carboxy-termi	68610-41-3		0.302	mg	700000	2744
								supplier	GLUE	Phenol-formaldehyde polymer	9003-35-4		0.043	mg	100000	392
				supplier	GLUE	Phenol polymer with formaldehyde,glycidyl et	28064-14-4		0.040	mg	92000	361				
				supplier	GLUE	Dapsone	80-08-0		0.042	mg	97000	380				
				supplier	GLUE	Reaction product bisphenol-A-(epichlorhydrin	25068-38-6		0.004	mg	10000	39				
				supplier	GLUE	4,4, Isopropylidenediphenol	80-05-7		0.000	mg	1000	4				
BONDING WIRE (MKE 4N)	M-011 Other inorganic materials	2.847	mg	supplier	BONDING WIRE	Gold (Au)	7440-57-5		2.847	mg	1000000	25857				
				supplier	SOLDERBALL	Silver (Ag)	7440-22-4		0.218	mg	35000	1984				
SOLDERBALL (Sn96.5Ag3.5)	M-011 Other inorganic materials	6.241	mg	supplier	MOLDING COMPOUND	Silica fused (SiO2)	60676-86-0		54.290	mg	900000	493099				
				supplier	MOLDING COMPOUND	Epoxy resin	Proprietary		2.743	mg	45000	24917				
				supplier	MOLDING COMPOUND	Phenol resin	Proprietary		2.439	mg	40000	22148				
				supplier	MOLDING COMPOUND	Metal Hydroxide	Proprietary		0.610	mg	10000	5537				
				supplier	MOLDING COMPOUND	Carbon black	1333-86-4		0.305	mg	5000	2769				