




Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32L412RBI6	P02I*464XXXA	A	9996	2018-07-09
	Amount	UoM	Unit type	ST ECOPACK Grade
	27.00	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	NAC	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
BGA	5X5X0.6	64	No lead	
Comment	Package : A019 UFBGA 5X5X0.6 64L P 0.5 MM 8526322			

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-27th June 2018				
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	P021*464XXXXA				7000001.0	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	1.689	mg	supplier	die	Silicon (Si)	7440-21-3		1.415	mg	837774	52407				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.013	mg	7697	481				
				supplier	metallization	Copper (Cu)	7440-50-8		0.116	mg	68680	4296				
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.038	mg	22499	1407				
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	592	37				
				supplier	metallization	Tungsten (W)	7440-33-7		0.001	mg	592	37				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.030	mg	17762	1111				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.075	mg	44405	2778				
				DIE OR DIES	M-011 Other inorganic materials	1.439	mg	supplier	DIE	Silicon (Si)	7440-21-3		1.439	mg	1000000	53310
				SUBSTRATE (DS7409HGB)	M-011 Other inorganic materials	9.187	mg	supplier	CORE	Glass Cloth	65997-17-3		1.562	mg	170000	57845
supplier	CORE	Epoxy resin	61788-97-4						0.367	mg	40000	13611				
supplier	CORE	Flame resistant epoxy resin	223769-10-6						0.367	mg	40000	13611				
supplier	CORE	Heat resistant resin	25722-66-1						0.367	mg	40000	13611				
supplier	CORE	Silica filler	7631-86-9						1.011	mg	110000	37429				
supplier	CORE	Metal Hydroxide	Proprietary						0.184	mg	20000	6805				
supplier	COPPER FOIL	Copper (Cu)	7440-50-8						3.859	mg	420000	142911				
supplier	SOLDERMASK (AUS320)	Solvent naphtha(petroleum),heavy aromatic	64742-94-5						0.505	mg	55000	18715				
supplier	SOLDERMASK (AUS320)	Napthalene	91-20-3						0.053	mg	5800	1974				
supplier	SOLDERMASK (AUS320)	Phosphin oxide derivative	Proprietary						0.018	mg	2000	681				
supplier	SOLDERMASK (AUS320)	Talc containing no asbestiform fibers	14807-96-6						0.138	mg	15000	5104				
supplier	SOLDERMASK (AUS320)	Barium sulfate	7727-43-7						0.230	mg	25000	8507				
supplier	SOLDERMASK (AUS320)	Dipropylene glycol monomethyl ether	34590-94-8						0.138	mg	15000	5104				
supplier	CU PLATING	Copper (Cu)	7440-50-8						0.331	mg	36000	12249				
supplier	NI PLATING	Nickel (Ni)	7440-02-0						0.046	mg	5000	1701				
supplier	AU PLATING	Gold (Au)	7440-57-5						0.011	mg	1200	408				
DIE ATTACH (ATB-130U)	M-011 Other inorganic materials	0.215	mg					supplier	GLUE	Butadiene,acrylonitrile polymer,carboxy-termi	68610-41-3		0.151	mg	700000	5579
				supplier	GLUE	Phenol-formaldehyde polymer	9003-35-4		0.022	mg	100000	797				
				supplier	GLUE	Phenol polymer with formaldehyde,glycidyl et	28064-14-4		0.020	mg	92000	733				
				supplier	GLUE	Dapsone	80-08-0		0.021	mg	97000	773				
				supplier	GLUE	Reaction product bisphenol-A-(epichlorhydrin	25068-38-6		0.002	mg	10000	80				
				supplier	GLUE	4,4, isopropylidenediphenol	80-05-7		0.000	mg	1000	8				
BONDING WIRE (Au wire)	M-011 Other inorganic materials	0.471	mg	supplier	BONDING WIRE	Gold (Au)	7440-57-5		0.471	mg	1000000	17430				
SOLDERBALL (Sn96.5Ag3.5)	M-011 Other inorganic materials	1.987	mg	supplier	SOLDERBALL	Tin (Sn)	7440-31-5		1.918	mg	965000	71027				
				supplier	SOLDERBALL	Silver (Ag)	7440-22-4		0.070	mg	35000	2576				
ENCAPSULATION (GE-100LFC5)	M-011 Other inorganic materials	12.011	mg	supplier	MOLDING COMPOUND	Silica fused (SiO2)	60676-86-0		10.641	mg	900000	394125				
				supplier	MOLDING COMPOUND	Epoxy resin	Proprietary		0.617	mg	45000	22834				
				supplier	MOLDING COMPOUND	Phenol resin	Proprietary		0.548	mg	40000	20297				
				supplier	MOLDING COMPOUND	Metal Hydroxide	Proprietary		0.137	mg	10000	5074				
				supplier	MOLDING COMPOUND	Carbon black	1333-86-4		0.069	mg	5000	2537				