




Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32L443RCI3	P321*435XXXZ	A	9996	27-09-2017
	Amount	UoM	Unit type	ST ECOPACK Grade
	34.40	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	5,5,0.6	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-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	P321*435XXXZ				6999999.0	1000000.0				
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	2.095	mg	supplier	die	Silicon (Si)	7440-21-3		1.755	mg	837709	51017				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.016	mg	7637	465				
				supplier	metallization	Copper (Cu)	7440-50-8		0.144	mg	68735	4186				
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.047	mg	22434	1366				
				supplier	metallization	Titanium (Ti)	7440-32-6		0.002	mg	955	58				
				supplier	metallization	Tungsten (W)	7440-33-7		0.001	mg	477	29				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.037	mg	17661	1076				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.093	mg	44391	2703				
				SILICON DIE	M-011 Other inorganic materials	1.761	mg	supplier	DIE	Silicon (Si)	7440-21-3		1.761	mg	1000000	51192
				SUBSTRATE (DS7409HGB)	M-011 Other inorganic materials	15.889	mg	supplier	CORE	Glass Cloth	65997-17-3		0.917	mg	57700	26651
supplier	CORE	Epoxy resin	61788-97-4						0.165	mg	10400	4804				
supplier	CORE	Flame resistant epoxy resin	223769-10-6						0.146	mg	9200	4249				
supplier	CORE	Heat resistant resin	25722-66-1						0.146	mg	9200	4249				
supplier	CORE	Silica filler	7631-86-9						0.348	mg	21900	10115				
supplier	CORE	Metal Hydroxide	Proprietary						0.275	mg	17300	7991				
supplier	CORE	Copper foil	7440-50-8						1.668	mg	105000	48498				
supplier	SOLDERMASK (AUS308)	Talc containing no asbestiform fibers	14807-96-6						0.130	mg	8200	3788				
supplier	SOLDERMASK (AUS308)	Barium sulfate	7727-43-7						2.180	mg	137200	63371				
supplier	SOLDERMASK (AUS308)	Dipropylene monomethyl ether	34590-94-8						0.879	mg	55300	25542				
supplier	SOLDERMASK (AUS308)	Napthalene	91-20-3						0.334	mg	21000	9700				
supplier	SOLDERMASK (AUS308)	Morpholine derivative	Proprietary						0.365	mg	23000	10623				
supplier	CU PLATING	Copper (Cu)	7440-50-8						5.653	mg	355800	164340				
supplier	NI PLATING	Nickel (Ni)	7440-02-0						2.342	mg	147400	68082				
supplier	AU PLATING	Gold (Au)	7440-57-5						0.340	mg	21400	9884				
DIE ATTACH (ATB-130U)	M-011 Other inorganic materials	0.264	mg	supplier	GLUE	Butadiene,acrylonitrile polymer,carboxy-termi	68610-41-3		0.185	mg	700000	5365				
				supplier	GLUE	Phenol-formaldehyde polymer	9003-35-4		0.026	mg	100000	766				
				supplier	GLUE	Phenol polymer with formaldehyde,glycidyl et	28064-14-4		0.024	mg	92000	705				
				supplier	GLUE	Dapsone	80-08-0		0.026	mg	97000	743				
				supplier	GLUE	Reaction product bisphenol-A-(epichlorhydrin	25068-38-6		0.003	mg	10000	77				
				supplier	GLUE	4,4, Isopropylidenediphenol	80-05-7		0.000	mg	1000	8				
BONDING WIRE (MKE 4N)	M-011 Other inorganic materials	0.328	mg	supplier	BONDING WIRE	Gold (Au)	7440-57-5		0.328	mg	1000000	9545				
SOLDERBALL (Sn96.5Ag3.5)	M-011 Other inorganic materials	1.987	mg	supplier	SOLDERBALL	Tin (Sn)	7440-31-5		1.918	mg	965000	55748				
				supplier	SOLDERBALL	Silver (Ag)	7440-22-4		0.070	mg	35000	2022				
ENCAPSULATION (GE-100LFC5)	M-011 Other inorganic materials	12.076	mg	supplier	MOLDING COMPOUND	Silica fused (SiO2)	60676-86-0		10.659	mg	900000	309848				
				supplier	MOLDING COMPOUND	Epoxy resin	Proprietary		0.638	mg	45000	18537				
				supplier	MOLDING COMPOUND	Phenol resin	Proprietary		0.567	mg	40000	16478				
				supplier	MOLDING COMPOUND	Metal Hydroxide	Proprietary		0.142	mg	10000	4119				
supplier	MOLDING COMPOUND	Carbon black	1333-86-4		0.071	mg	5000	2060								