




Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32F103ZCH6	S2X3*414XXXX	A	998Z	20-10-2017
	Amount	UoM	Unit type	ST ECOPACK Grade
	250.00	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	
FBGA	10x10x1.7	144		
Comment	Package : X3 LFBGA 10x10x1.7 144 F12x12 0.8 7163385			

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- 7th July 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	SZX3*414XXXX				5999998.0	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	19.486	mg	supplier	die	Silicon (Si)	7440-21-3		18.420	mg	945294	73680
				supplier	metallization	Aluminium (Al)	7429-90-5		0.072	mg	3695	288
				supplier	metallization	Copper (Cu)	7440-50-8		0.362	mg	18577	1448
				supplier	metallization	Cobalt (Co)	7440-48-4		0.067	mg	3438	268
				supplier	metallization	Titanium (Ti)	7440-32-6		0.020	mg	1026	80
				supplier	metallization	Tungsten (W)	7440-33-7		0.039	mg	2001	156
				supplier	Passivation	Silicon Nitride	12033-89-5		0.047	mg	2412	188
				supplier	Passivation	Silicon Oxide	7631-86-9		0.459	mg	23555	1836
				Supplier	Glass	Silica, amorphous, fused	60676-86-0		0.606	mg	482955	2424
Die Attach Epoxy_ABLEBOND 2025D	M-011 Other inorganic materials	1.255	mg	Supplier	Plastics/polymers	Bismaleimide Monomer	TS ref# 10049		0.392	mg	312500	1569
				Supplier	Plastics/polymers	Acrylate monomer	TS ref# 10050		0.107	mg	85227	428
				Supplier	Plastics/polymers	Epoxy resin	TS ref# 10042		0.107	mg	85227	428
				Supplier	Plastics/polymers	Acrylic resin	TS ref# 10051		0.043	mg	34091	171
Mold Compound_EME-G770LC_Sumitomo	M-011 Other inorganic materials	111.220	mg	Supplier	Plastics/polymers	Epoxy Resin A	Proprietary		2.228	mg	19836	8912
				Supplier	Plastics/polymers	Epoxy Resin B	Proprietary		2.228	mg	19836	8912
				Supplier	Plastics/polymers	Phenol Resin A	Proprietary		2.228	mg	19836	8912
				Supplier	Plastics/polymers	Phenol Resin B	Proprietary		2.228	mg	19836	8912
				Supplier	Plastics/polymers	Silica(Amorphous) A	60676-86-0		80.462	mg	726171	321847
				Supplier	Plastics/polymers	Silica(Amorphous) B	7631-86-9		19.003	mg	169180	76013
				Supplier	Plastics/polymers	Metal Hydroxide	Proprietary		2.228	mg	19836	8912
				Supplier	Additives	Carbon Black	1333-86-4		0.614	mg	5470	2458
Wire_Wire AU 20um R_MKE	Bonding Wire	1.011	mg	Supplier	Metals	Gold	7440-57-5		1.011	mg	1000000	4045
Solder Ball_96.5SN/3AG/0.5CU 0.4M	Metals	35.709	mg	Supplier	Metals	Tin	7440-31-5		34.459	mg	965000	137835
				Supplier	Metals	Silver	7440-22-4		1.071	mg	30000	4285
				Supplier	Metals	Copper	7440-50-8		0.179	mg	5000	714
Substrate_LFBGA 10X10 144LD 0.8P 2	M-011 Other inorganic materials	81.320	mg	Supplier	Soldermask	PAK resin (polyacrylate)	Proprietary		1.866	mg	22950	7465
				Supplier	Soldermask	Epoxy resin	Proprietary		1.015	mg	12481	4060
				Supplier	Soldermask	Phthalocyanine blue	147-14-8		0.016	mg	193	63
				Supplier	Soldermask	Organic pigment	Proprietary		0.016	mg	193	63
				Supplier	Soldermask	Barium sulfate	7727-43-7		2.072	mg	25481	8288
				Supplier	Soldermask	Talc containing no asbestiform fibers	14807-96-6		0.515	mg	6336	2061
				Supplier	Soldermask	Silica, amorphous Ⓜ	7631-86-9		0.049	mg	598	195
				Supplier	Soldermask	Antifoamer & Leveling agent	Proprietary		0.217	mg	2673	869
				Supplier	Core	Cured thermosetting resin (including inorganic)	65997-17-3		29.051	mg	357246	116205
				Supplier	Core	Continuous Filament Fiber Glass	Trade Secret		4.411	mg	54246	17645
				Supplier	Core	Copper Foil	7440-50-8		19.083	mg	234663	76331
				Supplier	Copper plating	Copper	7440-50-8		21.052	mg	258886	84210
				Supplier	Finishing	Nickel	7440-02-0		1.836	mg	22577	7344
				Supplier	Finishing	Gold	7440-57-5		0.120	mg	1477	480