

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32F051K8U6	F0MG*440XXXB	A	P1C7	25-10-2018
	Amount	UoM	Unit type	ST ECOPACK Grade
	48.87	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	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFN	5X5X0.55	32	No lead	
Comment	Package : A0B8 UFQFPN 5X5X0.55 32L 0.5 MM PITCH 8202208			

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	FOMG*440XXXB				6000001.0	999989.0
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	2.918	mg	supplier	die	Silicon (Si)	7440-21-3		2.633	mg	902330	53875
				supplier	metallization	Aluminium (Al)	7429-90-5		0.019	mg	6511	389
				supplier	metallization	Copper (Cu)	7440-50-8		0.097	mg	33242	1985
				supplier	metallization	Cobalt (Co)	7440-48-4		0.018	mg	6169	368
				supplier	metallization	Titanium (Ti)	7440-32-6		0.005	mg	1714	102
				supplier	metallization	Tungsten (W)	7440-33-7		0.011	mg	3770	225
				supplier	Passivation	Silicon Nitride	12033-89-5		0.013	mg	4455	266
				supplier	Passivation	Silicon Oxide	7631-86-9		0.122	mg	41809	2496
				Supplier	Metals	Silver (Ag)	7440-22-4		0.145	mg	800000	2971
				Supplier	Plastics/polymers	methylene diacrylate	42594-17-2		0.024	mg	134000	498
Die Attach	M-011 Other inorganic materials	0.181	mg	Supplier	Polymers	Dicyclopentenyloxyethyl methacrylate	68586-19-6		0.005	mg	25000	93
				Supplier	Organic Compounds	Polybutadiene Anhydride	Proprietary		0.005	mg	30000	111
				Supplier	Epoxy Resin	Epoxy cyclohexylethyltrimethoxysilane	3388-04-3		0.001	mg	5000	19
				Supplier	Amines	Bis(α,α-dimethylbenzyl) peroxide	80-43-3		0.001	mg	5000	19
				Supplier	Metallic compounds	Palladium (Pd)	7440-05-3		0.000	mg	1000	4
				Supplier	Glass	silica vitreous	60676-86-0		17.311	mg	889339	354188
				Supplier	Phenol Resin	Biphenyl epoxy resin	85954-11-6		0.901	mg	46109	18444
Mold Compound	M-011 Other inorganic materials	19.474	mg	Supplier	Phenol Resin	Phenolic resin	205830-20-2		0.703	mg	35965	14386
				Supplier	Epoxy Resin	Epoxy resin	Proprietary		0.361	mg	18444	7378
				Supplier	Glass	carbon black	1333-86-4		0.036	mg	1844	738
				Supplier	Glass	other	Proprietary		0.162	mg	8300	3320
				Supplier	Metals	Silver	7440-22-4		0.191	mg	960000	3914
				Supplier	Metals	Others	Proprietary		0.008	mg	40000	163
Bonding wire	M-011 Other inorganic materials	0.199	mg	Supplier	Metals	Copper (Cu)	7440-50-8		25.353	mg	973561	518757
				Supplier	Metals	Iron (Fe)	7439-89-6		0.619	mg	23764	12662
				Supplier	Metals	Iron Phosphide (Fe2P)	1310-43-6		0.037	mg	1431	762
				Supplier	Metals	Zinc (Zn)	7440-66-6		0.032	mg	1244	663
Lead frame	M-011 Other inorganic materials	26.042	mg	Supplier	Metals	Nickel (Ni)	7440-02-0		0.053	mg	916800	1094
				Supplier	Metals	Palladium (Pd)	7440-05-3		0.003	mg	58700	70
				Supplier	Metals	Gold (Au)	7440-57-5		0.001	mg	24500	29
Leadframe plating	M-011 Other inorganic materials	0.058	mg	Supplier	Metals	Palladium (Pd)	7440-05-3		0.003	mg	58700	70
				Supplier	Metals	Gold (Au)	7440-57-5		0.001	mg	24500	29