


Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32L053R6H6	U4R8*417XXXX	A	959	2018-04-09
	Amount	UoM	Unit type	ST ECOPACK Grade
	64.00	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	
NAC	Tin/Silver/Copper (Sn/Ag/Cu)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
BGA	5x5x1.2	64	No lead	
Comment	Package : R8 TFBGA 5x5x1.2 64 F8x8 0.5 7132897			

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 :						Mfr Item Name	U4R8*417XXX				5999998.0	1000018.0				
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	4.675	mg	supplier	die	Silicon (Si)	7440-21-3		4.463	mg	954652	69734				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.019	mg	4064	297				
				supplier	metallization	Copper (Cu)	7440-50-8		0.062	mg	13262	969				
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.007	mg	1497	109				
				supplier	metallization	Titanium (Ti)	7440-32-6		0.009	mg	1925	141				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.016	mg	3422	250				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.099	mg	21176	1547				
				supplier	core+ fiber glass	Bismaleimide (B)	13676-54-5		0.774	mg	45252	12100				
				supplier	core+ fiber glass	Triazine (T)	25722-66-1		0.774	mg	45252	12100				
				supplier	core+ fiber glass	Fiber glass	65997-17-3		2.310	mg	134990	36094				
Substrate	M-011 Other inorganic materials	17.112	mg	supplier	core+ fiber glass	metal hydroxide	21645-51-2		0.053	mg	3068	820				
				supplier	core+ fiber glass	Zinc hydroxide	20427-58-1		0.016	mg	920	246				
				supplier	core+ fiber glass	Proprietary	Proprietary		1.297	mg	75778	20262				
				supplier	core+ fiber glass	Calcium sulfate	7778-18-9		0.026	mg	1534	410				
				supplier	solder mask	Baryum sulfate	7727-43-7		0.243	mg	14199	3796				
				supplier	solder mask	(2-methoxymethylethoxy)propanol	34590-94-8		0.040	mg	2366	633				
				supplier	solder mask	Talc containing no asbestiform fibers	14807-96-6		0.135	mg	7888	2109				
				supplier	solder mask	Quartz	14808-60-7		0.135	mg	7888	2109				
				supplier	solder mask	Acrylates derivative	407-47-6		0.559	mg	32657	8732				
				supplier	solder mask	aromatic hydrocarbon	Proprietary		0.054	mg	3155	844				
				supplier	solder mask	amine compound	Proprietary		0.008	mg	473	127				
				supplier	coating	Copper (Cu)	7440-50-8		10.586	mg	618639	165413				
				supplier	coating	Nickel (Ni)	7440-02-0		0.080	mg	4696	1256				
				supplier	coating	Gold (Au)	7440-57-5		0.021	mg	1244	333				
				Die Attach	M-011 Other inorganic materials	2.344	mg	supplier	glue or tape	Silver (Ag)	7440-22-4		2.085	mg	889400	32571
								supplier	glue or tape	Neopentyl glycol dimethacrylate	1985-51-9		0.117	mg	50000	1831
								supplier	glue or tape	2,6-Diglycidyl phenyl allyl ether	EC 417-470-1		0.129	mg	55000	2014
								supplier	glue or tape	palmitic acid	57-10-3		0.002	mg	1000	37
supplier	glue or tape	4-tert-butylcyclohexanol	98-52-2						0.007	mg	3000	110				
supplier	glue or tape	Hexamethyltetracosane-hexaene	111-02-4						0.002	mg	1000	37				
supplier	glue or tape	Fluorine trace	14762-94-8						0.001	mg	600	22				
supplier	Bonding wire	Gold (Au)	7440-57-5						0.351	mg	1000000	5483				
Wires	M-011 Other inorganic materials	0.351	mg	supplier	Moulding Compound	Biphenyl epoxy resin	85954-11-6		2.742	mg	83375	42849				
				supplier	Moulding Compound	Phenol resin	205830-20-2		1.371	mg	41688	21424				
				supplier	Moulding Compound	Quartz	14808-60-7		0.686	mg	20844	10712				
				supplier	Moulding Compound	Silica, vitreous	1333-86-4		27.818	mg	845756	434658				
				supplier	Moulding Compound	Carbon Black	1309-42-8		0.247	mg	7504	3856				
				supplier	Moulding Compound	Magnesium dihydroxide	Proprietary		0.027	mg	834	428				
Encapsulation	M-011 Other inorganic materials	32.891	mg	supplier	solder	Tin (Sn)	7440-31-5		6.513	mg	982700	101763				
				supplier	solder	Silver (Ag)	7440-22-4		0.080	mg	12000	1243				
				supplier	solder	Copper (Cu)	7440-50-8		0.033	mg	5000	518				
				supplier	solder	Nickel (Ni)	7440-02-0		0.001	mg	200	21				
				JIG-R	solder	Lead (Pb)	7439-92-1		0.001	mg	100	10				