


Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32G051F8P6	40YA*456XXXZ	A	9998	13-07-2023
	Amount	UoM	Unit type	ST ECOPACK Grade
	72.00	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
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable; if coating is used or other bulk termination	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
TSSOP	4.4x6.5	20	L bend	
Comment	Package : YA TSSOP 20 BODY 4.4 PITCH 0.65 0087225			

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-10 Jun 2022				
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	40YA*456XXXZ				6999980.0	1000013.9
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	3.052	mg	supplier	die	Silicon (Si)	7440-21-3		2.891	mg	947248	40153
				supplier	metallization	Aluminium (Al)	7429-90-5		0.008	mg	2621	111
				supplier	metallization	Copper (Cu)	7440-50-8		0.068	mg	22280	944
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.022	mg	7208	306
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	328	14
				supplier	metallization	Tungsten (W)	7440-33-7		0.001	mg	328	14
				supplier	Passivation	Silicon Nitride	12033-89-5		0.017	mg	5570	236
				supplier	Passivation	Silicon Oxide	7631-86-9		0.044	mg	14417	611
Leadframe (C194)	Copper and its alloy	27.072	mg	supplier	alloy	Copper (Cu)	7440-50-8		26.395	mg	975000	366600
				supplier	alloy	Iron (Fe)	7439-89-6		0.636	mg	23500	8836
				supplier	alloy	Zinc (Zn)	7440-66-6		0.032	mg	1200	451
				supplier	alloy	Metallic Phosphorus (P)	7723-14-0		0.008	mg	300	113
Leadframe plating (Ag)	M-011 Other inorganic materials	0.356	mg	supplier	coating	Silver (Ag)	7440-22-4		0.356	mg	1000000	4944
Glue epoxy (8290)	M-011 Other inorganic materials	0.230	mg	supplier	glue	Silver (Ag)	7440-22-4		0.173	mg	750000	2396
				supplier	glue	Reaction product: bisphenol-F-(epichlorhydrin)	9003-36-5		0.016	mg	70000	224
				supplier	glue	Fatty acids, C18-unsatd., dimers, polymers with	68475-94-5		0.009	mg	40000	128
				supplier	glue	.gamma. Butyrolactone	96-48-0		0.009	mg	40000	128
				supplier	glue	Polyoxyalkylene amine	9046-10-0		0.009	mg	40000	128
				supplier	glue	Epoxy Resin	Proprietary		0.009	mg	40000	128
				supplier	glue	Copper Oxide	1317-38-0		0.002	mg	10000	32
Bonding wire (Au)	M-011 Other inorganic materials	0.376	mg	supplier	glue	1,4-Bis(2,3-epoxypropoxy)butane	2425-79-8		0.002	mg	10000	32
				supplier	bonding wire	Gold (Au)	7440-57-5		0.372	mg	990480	5173
				supplier	bonding wire	Palladium (Pd)	7440-05-3		0.004	mg	9500	50
Encapsulation (EME-G700LS)	M-011 Other inorganic materials	39.868	mg	supplier	molding compound	Epoxy Resin	Proprietary		3.389	mg	85000	47066
				supplier	molding compound	Phenol Resin	205830-20-2		1.595	mg	40000	22149
				supplier	molding compound	Silica Amorphous A	60676-86-0		31.496	mg	790000	437441
				supplier	molding compound	Silica Amorphous B	7631-86-9		3.189	mg	80000	44298
				supplier	molding compound	Carbon Black	1333-86-4		0.199	mg	5000	2769
Finishing (Sn)	M-011 Other inorganic materials	1.047	mg	supplier	coating	Tin (Sn)	7440-31-5		1.047	mg	1000000	14542