



Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32U5F9ZJT6Q	E21A*476XXXZ	A	9991	21-07-2023
	Amount	UoM	Unit type	ST ECOPACK Grade
	1315.00	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 : add in comments	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFP	20x20	144	L bend	
Comment	Package : 1A LQFP 144 20X20X1.4 2 0099183			

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	E21A*476XXZ				6000001.0	1000000.7
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	29.100	mg	supplier	die	Silicon (Si)	7440-21-3		27.982	mg	961581	21279
				supplier	metallization	Aluminium (Al)	7429-90-5		0.124	mg	4261	94
				supplier	metallization	Copper (Cu)	7440-50-8		0.368	mg	12646	280
				supplier	metallization	Nickel (Ni)	7440-02-0		0.002	mg	69	2
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.063	mg	2165	48
				supplier	metallization	Titanium (Ti)	7440-32-6		0.016	mg	550	12
				supplier	metallization	Tungsten (W)	7440-33-7		0.002	mg	69	2
				supplier	Passivation	Silicon Nitride	12033-89-5		0.088	mg	3024	67
				supplier	Passivation	Silicon Oxide	7631-86-9		0.455	mg	15636	346
				Leadframe (C7025)	Copper & its alloys	330.000	mg	Supplier	Leadframe	Copper ( Cu )	7440-50-8	
Supplier	Leadframe	Nickel ( Ni )	7440-02-0						9.834	mg	29800	7478
Supplier	Leadframe	Silicon ( Si )	7440-21-3						2.145	mg	6500	1631
Supplier	Leadframe	Magnesium ( Mg )	7439-95-4						0.495	mg	1500	376
Supplier	Leadframe	Silver (Ag)	7440-22-4						1.551	mg	4700	1179
Supplier	Leadframe	Silver Powder	7440-22-4						4.431	mg	764000	3370
Glue epoxy (CRM-1076WA)	Precious metals	5.800	mg	Supplier	Glue or tape	Bisphenol F Type Epoxy Resin	9003-36-5		0.174	mg	30000	132
				Supplier	Glue or tape	Epoxy resin	Proprietary		0.348	mg	60000	265
				Supplier	Glue or tape	Hardener	Proprietary		0.174	mg	30000	132
				Supplier	Glue or tape	Ethylene dimethacrylate	97-90-5		0.435	mg	75000	331
				Supplier	Glue or tape	1,4-Cyclohexanedimethanol diglycidyl ether	14228-73-0		0.174	mg	30000	132
				Supplier	Glue or tape	Dicyandiamide	461-58-5		0.032	mg	5500	24
				Supplier	Glue or tape	1,1-Di(t-butylperoxy)cyclohexane	3006-86-8		0.032	mg	5500	24
				Supplier	Bonding wire	Gold	7440-57-5		2.372	mg	988500	1804
Bonding wire (Au)	Precious metals	2.400	mg	Supplier	Bonding wire	Palladium	7440-05-3		0.028	mg	11500	21
				Supplier	Molding Compound	2,2'-((3,3',5,5'-Tetramethyl-(1,1'-biphenyl))-4,4'	85954-11-6		37.448	mg	40000	28478
				Supplier	Molding Compound	Epoxy resin	Proprietary		18.724	mg	20000	14239
Encapsulation (EME-G6315H)	M-011 Other inorganic materials	936.200	mg	Supplier	Molding Compound	Phenol Resin	Proprietary		70.215	mg	75000	53395
				Supplier	Molding Compound	Silica(Amorphous) A	60676-86-0		664.234	mg	709500	505121
				Supplier	Molding Compound	Silica(Amorphous) B	7631-86-9		140.430	mg	150000	106791
				Supplier	Molding Compound	Carbon black	1333-86-4		5.149	mg	5500	3916
				Supplier	Molding Compound	Carbon black	1333-86-4		5.149	mg	5500	3916
External Plating	M-011 Other inorganic materials	11.500	mg	Supplier	Matte Sn	Tin (Sn)	7440-31-5		11.499	mg	999900	8744
External Plating			mg	Supplier	Matte Sn	Impurities	-		0.001	mg	100	1