

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32L431CCU7 STM32L431CCU7TR	76MI*435XXXZ	A	998Z	2024-04-01
	Amount	UoM	Unit type	ST ECOPACK Grade
	98.20	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	Tin (Sn), immersion	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFN	7x7x0.55	48	flat	
Comment	Package : A0B9 UFQFPN 7X7X0.55 48L 0.5 MM PITCH 8202210			

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-14th June 2023				
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	76MI*435XXXZ				5999999.0	999999.3				
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	3.511	mg	#N/A	die	Silicon (Si)	7440-21-3		3.171	mg	903161	32292				
				#N/A	metallization	Aluminium (Al)	7429-90-5		0.016	mg	4557	163				
				#N/A	metallization	Copper (Cu)	7440-50-8		0.144	mg	41014	1466				
				#N/A	metallization	Tantalum (Ta)	7440-25-7		0.047	mg	13386	479				
				#N/A	metallization	Titanium (Ti)	7440-32-6		0.002	mg	570	20				
				#N/A	metallization	Tungsten (W)	7440-33-7		0.001	mg	285	10				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.037	mg	10538	377				
				#N/A	Passivation	Silicon Oxide	7631-86-9		0.093	mg	26488	947				
				Glue Epoxy (8290)	M-011 Other inorganic materials	0.954	mg	Supplier	Metals	Silver	7440-22-4		0.803	mg	841458	8177
								Supplier	Organic Compounds	Epoxy Resin 1	Proprietary		0.024	mg	24750	241
Supplier	Organic Compounds	Epoxy Resin 2	Proprietary						0.024	mg	24750	241				
Supplier	Organic Compounds	Other	Proprietary						0.024	mg	24750	241				
Supplier	Organic Compounds	Amine	Proprietary						0.024	mg	24750	241				
Supplier	Metallic compounds	Copper Oxide	1317-38-0						0.052	mg	54129	526				
Supplier	Organic Compounds	1,4-Bis(2,3-epoxypropoxy) butane	2425-79-8						0.005	mg	5413	53				
Encapsulation (G770)	M-011 Other inorganic materials	35.411	mg					Supplier	Organic Compounds	Epoxy Resin A	Proprietary		0.702	mg	19837	7153
				Supplier	Organic Compounds	Epoxy Resin B	Proprietary		0.702	mg	19837	7153				
				Supplier	Organic Compounds	Phenol Resin A	Proprietary		0.702	mg	19837	7153				
				Supplier	Organic Compounds	Phenol Resin B	Proprietary		0.702	mg	19837	7153				
				Supplier	Glass	Silica (Amorphous) A	60676-86-0		25.937	mg	732452	264127				
				Supplier	Glass	Silica (Amorphous) B	7631-86-9		5.764	mg	162767	58695				
				Supplier	Metallic compounds	Metal Hydroxide	Proprietary		0.702	mg	19837	7153				
Bonding Wires (Au)	Bonding Wire	0.750	mg	Supplier	Metals	Carbon Black	1333-86-4		0.198	mg	5595	2018				
				Supplier	Metals	Gold	7440-57-5		0.750	mg	1000000	7643				
Anode plating (Sn)	Metals	3.693	mg	Supplier	Metals	Tin	7440-31-5		3.693	mg	1000000	37605				
Leadframe (C7 + Ag)	Metals	53.878	mg	Supplier	Metals	Nickel	7440-02-0		1.582	mg	29365	16112				
				Supplier	Glass	Silicon	7440-21-3		0.350	mg	6500	3566				
				Supplier	Metals	Magnesium	7439-95-4		0.084	mg	1565	859				
				Supplier	Metals	Silver	7440-22-4		3.394	mg	63000	34566				
				Supplier	Metals	Copper	7440-50-8		48.467	mg	899570	493569				