




Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32L4R9AGI6	P8OQ*470XXXY	A	9996	20-10-2017
	Amount	UoM	Unit type	ST ECOPACK Grade
	72.25	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	NAC	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
BGA	7,7,0.6	169	No lead	
Comment	Package : A0YV UFBGA 7X7X0.6 169L P 0.5 MM 8502430			

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- 7th July 2017				
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	P8OQ*470XXXY				6000000.0	0.0				
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	5.775	mg	supplier	die	Silicon (Si)	7440-21-3		4.837	mg	837576	66948				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.045	mg	7792	623				
				supplier	metallization	Copper (Cu)	7440-50-8		0.397	mg	68745	5495				
				supplier	metallization	Cobalt (Co)	7440-48-4		0.001	mg	173	14				
				supplier	metallization	Tantalum (Ta)	7440-25-7		0.129	mg	22338	1785				
				supplier	metallization	Titanium (Ti)	7440-32-6		0.005	mg	866	69				
				supplier	metallization	Tungsten (W)	7440-33-7		0.003	mg	519	42				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.101	mg	17489	1398				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.257	mg	44502	3557				
				SUBSTRATE (DS7409HGB)	M-011 Other inorganic materials	34.207	mg	supplier	CORE	Glass Cloth	65997-17-3		5.815	mg	170000	80487
supplier	CORE	Epoxy resin	61788-97-4						1.368	mg	40000	18938				
supplier	CORE	Flame resistant epoxy resin	223769-10-6						1.368	mg	40000	18938				
supplier	CORE	Heat resistant resin	25722-66-1						1.368	mg	40000	18938				
supplier	CORE	Silica filler	7631-86-9						3.763	mg	110000	52080				
supplier	CORE	Metal Hydroxide	Proprietary						0.684	mg	20000	9469				
supplier	CORE	Copper (Cu)	7440-50-8						14.367	mg	420000	198851				
supplier	SOLDERMASK (AUS320)	Solvent naphtha(petroleum),heavy aromatic	64742-94-5						1.881	mg	55000	26040				
supplier	SOLDERMASK (AUS320)	Napthalene	91-20-3						0.198	mg	5800	2746				
supplier	SOLDERMASK (AUS320)	Phosphin oxide derivative	Proprietary						0.068	mg	2000	947				
supplier	SOLDERMASK (AUS320)	Talc containing no asbestiform fibers	14807-96-6						0.513	mg	15000	7102				
supplier	SOLDERMASK (AUS320)	Barium sulfate	7727-43-7						0.855	mg	25000	11836				
supplier	SOLDERMASK (AUS320)	Dipropylene glycol monomethyl ether	34590-94-8						0.513	mg	15000	7102				
supplier	CU PLATING	Copper (Cu)	7440-50-8						1.231	mg	36000	17045				
supplier	NI PLATING	Nickel (Ni)	7440-02-0						0.171	mg	5000	2367				
supplier	AU PLATING	Gold (Au)	7440-57-5						0.041	mg	1200	568				
DIE ATTACH (ATB-130U)	M-011 Other inorganic materials	0.686	mg					supplier	GLUE	Butadiene,acrylonitrile polymer,carboxy-termi	68610-41-3		0.480	mg	700000	6648
								supplier	GLUE	Phenol-formaldehyde polymer	9003-35-4		0.069	mg	100000	950
				supplier	GLUE	Phenol polymer with formaldehyde,glycidyl et	28064-14-4		0.063	mg	92000	874				
				supplier	GLUE	Dapsone	80-08-0		0.067	mg	97000	921				
				supplier	GLUE	Reaction product bisphenol-A-(epichlorhydrin	25068-38-6		0.007	mg	10000	95				
				supplier	GLUE	4,4, isopropylidenediphenol	80-05-7		0.001	mg	1000	9				
BONDING WIRE (MKE 4N)	M-011 Other inorganic materials	0.826	mg	supplier	BONDING WIRE	Gold (Au)	7440-57-5		0.826	mg	1000000	11437				
SOLDERBALL (Sn96.5Ag3.5)	M-011 Other inorganic materials	5.248	mg	supplier	SOLDERBALL	Tin (Sn)	7440-31-5		5.064	mg	965000	70090				
				supplier	SOLDERBALL	Silver (Ag)	7440-22-4		0.184	mg	35000	2542				
ENCAPSULATION (GE-100LFC5)	M-011 Other inorganic materials	25.508	mg	supplier	MOLDING COMPOUND	Silica fused (SiO2)	60676-86-0		22.863	mg	900000	-683554				
				supplier	MOLDING COMPOUND	Epoxy resin	Proprietary		1.190	mg	45000	16471				
				supplier	MOLDING COMPOUND	Phenol resin	Proprietary		1.058	mg	40000	14641				
				supplier	MOLDING COMPOUND	Metal Hydroxide	Proprietary		0.264	mg	10000	3660				
				supplier	MOLDING COMPOUND	Carbon black	1333-86-4		0.132	mg	5000	1831				