

Package Chemistry Substances Analysis Table

Package Type:	RLH153
Dimension:	11.5x13x1.0mm
Weight of Unit Package:	0.2543g
Temperature rating:	260
MSL:	3
Assembly Location:	STS-Korea
	Product is RoHS Compliant

Description	Chemicals Present	CAS Number	unit weight(g)	unit weight/package (%)	Amount (ppm)
Silicon Die	#1 Silicon	7440-21-3	0.0185	7.2737	72737
	subtotal		0.0185	7.2737	72,737
Bond wire	#1 Gold	7440-57-5	0.0000	0.0039	39
	subtotal		0.0000	0.0039	39
Die Attach 1_NAND	#1 Epoxy Resin	Trade Secret	0.0002	0.0944	944
	#2 Phenol Resin	Trade Secret	0.0002	0.0944	944
	#3 SiO2 Filler	Trade Secret	0.0001	0.0315	315
	#4 (Meta)Acrylic Copolymer	Trade Secret	0.0014	0.5662	5662
subtotal			0.0020	0.7864	7,864
Die Attach 2_Controller	#1 Epoxy Resin	Trade Secret	0.0000	0.0079	79
	#2 Phenol Resin	Trade Secret	0.0000	0.0079	79
	#3 SiO2 Filler	Trade Secret	0.0000	0.0039	39
	#4 (Meta)Acrylic Copolymer	Trade Secret	0.0002	0.0590	590
subtotal			0.0002	0.0786	786
Solder Paste	#1 Sn	7440-31-5	0.0000	0.0100	100
	#2 Ag	7440-22-4	0.0000	0.0005	5
	#4 ROSIN	Trade Secret	0.0000	0.0006	6
	#6 SOLVENT	112-59-4	0.0000	0.0005	5
subtotal			0.0000	0.0116	116
Substrate	#1 Glass cloth	65997-17-3	0.0337	13.2524	132524
	#2 Epoxy	7328-97-4	0.0106	4.1850	41850
	#4 Flame Resistant Epoxy Resin	Trade Secret	0.0106	4.1850	41850
	#5 Heat Resistant Resin	Trade Secret	0.0106	4.1850	41850
	#6 Inorganic Filler	Trade Secret	0.0222	8.7187	87187
	#7 solvent naphtha	64742-94-5	0.0006	0.2441	2441
	#8 naphthalene	91-20-3	0.0000	0.0174	174
	#9 phosphin oxide derivative	Trade Secret	0.0000	0.0174	174
	#10 Talc containing no asbestiform	14807-96-6	0.0000	0.0174	174
	#11 Barium sulfate	7727-43-7	0.0001	0.0244	244
	#12 dipropylene glycol monomethyl ether	34590-94-8	0.0001	0.0279	279
	subtotal			0.0887	34.8747
Mold compound	#1 Epoxy Resin A	Trade Secret	0.0089	3.5091	35091
	#2 Epoxy Resin B	Trade Secret	0.0051	2.0052	20052
	#3 Phenol Resin A	Trade Secret	0.0051	2.0052	20052
	#4 Phenol Resin B	Trade Secret	0.0051	2.0052	20052
	#5 Silica(Amorphous) A	60676-86-0	0.0893	35.0909	350909
	#6 Silica(Amorphous) B	7631-86-9	0.0064	2.5065	25065
	#7 Aluminium and its compounds	Trade Secret	0.0064	2.5065	25065
	#8 Carbon Black	1333-86-4	0.0013	0.5013	5013
subtotal			0.1275	50.1299	501,299
Chip Capacitor	#1 Sn	7440-31-5	0.0001	0.0295	295
	#2 Ni	7440-02-0	0.0001	0.0295	295
	#3 Cu	7440-50-8	0.0001	0.0295	295
	#4 Barium titanate(IV)	12047-27-7	0.0001	0.0295	295
subtotal			0.0003	0.1180	1,180
Solder Ball	#1 Metallic Tin	7440-31-5	0.0168	6.6056	66056
	#2 Silver atom	7440-22-4	0.0002	0.0807	807
	#3 Metallic Copper	7440-50-8	0.0001	0.0336	336
	#4 Nickel Element	7440-02-0	0.0000	0.0034	34
subtotal			0.0171	6.7233	67,233
TOTAL PACKAGE			0.2543	100.0000	1,000,000

Disclaimer:

In general, four decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

Document Title: Material Declaration Datasheet (MDDS) - eMMC153 (RLH153) - STS KOREA - Au Wire
Document Number: 002-12857

Rev.	ECN No.	Orig. of Change	Description of Change
**	5259869	AAC	NEW RELEASE