

# Chemicals contained in products

## Package-type

Epson Package name; **PLP063031A-10PIN / Halogen free**

JEITA Package name; **(P-UPLP010-03.10x03.00-0.50)**

Weight; **0.012 [g]** \*Note1

Part	Subpart	Subpart weight [mg]	Substance name	CAS No.	Content *Note2		Application	
					[mg]	[ppm]		
IC Die	IC Die	0.40	Silicon	7440-21-3	0.40	999894	Base material	
			Boron	7440-42-8	0.000001	2	Dopant	
			Phosphorus	7723-14-0	0.000002	5	Dopant	
			Aluminum	7429-90-5	0.00001	20	Metalization	
			Arsenic *Note3	7440-38-2	0.000002	5	Dopant	
			Fluorine *Note3	7782-41-4	0.000001	2	Dopant	
			Titanium *Note3	7440-32-6	0.00001	20	Metalization	
			Molybdenum *Note3	7439-98-7	0.00001	20	Metalization	
			Tungsten *Note3	7440-33-7	0.00001	30	Metalization	
			Cobalt *Note3	7440-48-4	0.000001	2	Metalization	
	Stress buffer coat	0.008	Polyimide	-	0.008	1000000	Stress buffer coat *Note4	
Package	Die Bonding material	0.14	Silver	7440-22-4	0.10	750000	Base material	
			Epoxy resin	-	0.027	200000	Adhesive	
			Phenol resin	-	0.007	50000	Adhesive	
	Substrate	1.2	Gold	7440-57-5	0.023	19486	Base material	
			Nickel	7440-02-0	1.2	980514	Base material	
	Bonding Wire	0.07	Gold	7440-57-5	0.073	1000000	Base material	
	Mold resin	10.2	Epoxy resin	-	0.51	49954	Base material	
			Phenol resin	-	0.46	44959	Hardening accelerator	
			Silica	60676-86-0	8.9	867163	Filler	
			Organic phosphorous compound	-	0.051	4995	Hardening accelerator	
			Carbon black	1333-86-4	0.030	2956	Coloring agent	
				Metal hydroxide	-	0.31	29972	Flame retardant

Regarding the information of chemical substances

\*Note1 The weight might be somewhat different depending on an individual built-in IC-chip specification like the size etc.

\*Note2 Content data are estimated values based on supplier information and intended levels of content in product.

Actual measurements may vary from these values somewhat.

\*Note3 Use or not-use of these substances depends on individual built-in IC-chip specification.

\*Note4 The stress buffer coat may not be used depending on the individual model.