Chemicals contained in products

Package-type

Epson Package name; **PLP064040A-28PIN / Halogen free**

JEITA Package name; **(P-UPLP028-04.00x04.00-0.50)**

Weight; **0.021** [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	0.13	Silver	7440-22-4	0.10	750000	Base material
			Epoxy resin	-	0.027	200000	Adhesive
			Phenol resin	-	0.007	50000	Adhesive
	Substrate	3.5	Gold	7440-57-5	0.070	19837	Base material
			Nickel	7440-02-0	3.44	980163	Base material
	Bonding Wire	0.16	Gold	7440-57-5	0.164	1000000	Base material
	Mold resin	17	Epoxy resin	-	1.0	60000	Base material
			Phenol resin	-	1.0	60000	Hardening accelerator
			Silica	60676-86-0	14.4	857000	Filler
			Organic phosphorous compound	-	0.08	5000	Hardening accelerator
			Carbon black	1333-86-4	0.050	3000	Coloring agent
			Metal hydroxide	-	0.25	15000	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.