

# Fairchild Semiconductor Product Package Material Disclosure

Package Type	TO-220-3 lead					
	Maximum	2.09				
Weight of Package (grams)	Minimum	1.97				
	Material	Wt in grams	Substance or Material	Wt% in finished product min	Wt% in finished product max	CAS #
<b>Lead Frame</b>	Copper alloy	1.50	Copper	71.54	75.96	7440-50-8 7439-89-6 7723-14-0 7440-22-4
			Iron	71.44	75.81	
			Phosphorus	0.07	0.08	
				0.02	0.02	
			Silver (DP)	0.02	0.02	
				0.00	0.05	
<b>Encapsulation</b>	Epoxy	5.18E-01	Silica	24.70	26.23	1309-64-4 1314-60-9 68928-70-1 40039-93-8 68541-56-0 79-94-7
			Carbon Black	15.28	20.37	
			Resin	0.00	0.38	
			Antimony Compound	3.82	8.79	
			Brominated Compound	0.13	0.76	
				0.38	1.02	
<b>Plating</b>	Solder	1.33E-02	Tin	0.22	1.09	7440-31-5 7439-92-1
			Lead	0.19	0.93	
	or Lead-free Solder	1.33E-02	Tin	0.03	0.16	
				0.22	1.09	
				0.22	1.09	7440-31-5
<b>Chip</b>	Silicon and inorganic compounds	2.81E-03	Silicon and trace metals	0.13	0.15	7440-21-3
				0.13	0.15	
<b>Die Attach</b>	Soft solder	1.11E-03	Lead	0.05	0.06	7439-92-1 7440-31-5 7440-22-4
			Tin	0.05	0.05	
				0.01	0.01	
			Silver	0.01	0.01	
				0.00	0.00	
<b>Wire Bond</b>	Gold wire	3.71E-04	Gold	0.02	0.02	7440-57-5
				0.02	0.02	
	or Aluminum wire	2.44E-03	Aluminum	0.11	0.13	7429-90-5
				0.11	0.13	



## Materials Disclosure Disclaimer

The information provided in this Materials Disclosure is, to our knowledge, correct. However, there is no guarantee to completeness or accuracy, as some information is derived from data sources outside the company. Also, there may not be information included in this statement regarding the minute amounts of dopant and metal materials contained within the electrically active or passive devices contained within the finished product.