

Supplier Name: Texas Instruments Inc. (DUNS# 00-732-1904)  
 Contact Info: [ti.com/support](http://ti.com/support)  
 Form/Declaration Type: Distribute - RoHS and IEC 62474 DB  
 Created on: 05/17/2022

**Details for "TL16CS50DIPTR"**

**Current Product Information**

TI part number	Lead finish/Ball material	MSL rating/peak reflow	Assembly site	Package   Pins	Package body size (mm)	Total device mass (mg)*
TL16CS50DIPTR	NIPDAU	Level-3-260C-168 HR	TI TAIWAN A/T	PT   48	7x7x1.4	173.8

\*Total Device Mass  
 The summary mass is a rounded value and will be within approximately +/- 10% of the detailed mass value.

**Environmental Ratings Information**

RoHS	REACH	Green	IEC 62474 DB
Yes	Yes	Yes	Yes

**Component Information**

Component	Substance	CAS Number	Amount (mg)	Homogeneous Material Level		Component Level	
				Percentage %	ppm	Percentage %	ppm
<b>Bond Wire</b>							
Copper and Its Alloys	Copper	7440-50-8	0.30697	99.99772	999977	0.176619	1766
Copper and Its Alloys	Iron	7439-89-6	0.000001	0.000326	3	0.000001	0
Nickel and Its Alloys	Nickel	7440-02-0	0.000001	0.000326	3	0.000001	0
Other Nonferrous Metals and Alloys	Manganese	7439-96-5	0.000001	0.000326	3	0.000001	0
Precious Metals	Silver	7440-22-4	0.000004	0.001303	13	0.000002	0
Sub-Total			0.306977	100	1000000	0.176624	1766
<b>Die Attach Adhesive</b>							
Precious Metals	Silver	7440-22-4	0.21317	69.99901	699999	0.12265	1227
Thermoplastics	Epoxy	85954-11-6	0.091359	30.00099	300001	0.052565	526
Sub-Total			0.304529	100	1000000	0.175215	1752
<b>Lead Frame</b>							
Copper and Its Alloys	Copper	7440-50-8	52.716668	97.424999	974250	30.331271	303313
Copper and Its Alloys	Iron	7439-89-6	1.29864	2.4	24000	0.747191	7472
Copper and Its Alloys	Phosphorus	7723-14-0	0.008117	0.015001	150	0.00467	47
Other Nonferrous Metals and Alloys	Lead	7439-92-1	0.016233	0.03	300	0.00934	93
Other Nonferrous Metals and Alloys	Tin	7440-31-5	0.016233	0.03	300	0.00934	93
Zinc and Its Alloys	Zinc	7440-66-6	0.05411	0.1	1000	0.031133	311
Sub-Total			54.110001	100	1000000	31.132944	311329
<b>Lead Frame Plating</b>							
Nickel and Its Alloys	Nickel	7440-02-0	0.627792	95.12	951200	0.361209	3612
Precious Metals	Gold	7440-57-5	0.005148	0.78	7800	0.002962	30
Precious Metals	Palladium	7440-05-3	0.02706	4.1	41000	0.015569	156
Sub-Total			0.66	100	1000000	0.37974	3797
<b>Mold Compound</b>							
Other Inorganic Materials	Fused Silica	60676-86-0	98.813151	84.34	843400	56.853526	568535
Other Nonferrous Metals and Alloys	Metal Hydroxide	Trade Secret	5.858024	5	50000	3.370496	33705
Other Plastics and Rubber	Carbon Black	1333-86-4	0.199173	0.17	1700	0.114597	1146
Thermoplastics	Epoxy	85954-11-6	12.290135	10.49	104900	7.071301	70713
Sub-Total			117.160483	100	1000000	67.409919	674099
<b>Semiconductor Device</b>							
Ceramics / Glass	Doped Silicon	7440-21-3	1.261041	100	1000000	0.725558	7256
Sub-Total			1.261041	100	1000000	0.725558	7256
<b>Total</b>			173.803031			100	1000000

**Important Note**

The ppm calculations are at the homogeneous material level and are maximum concentration values. The ppm displayed represents the homogeneous material with the highest ppm for that substance. The amount (mg) calculations represent the maximum total amount of each substance within the component.  
 The ppm calculations are at the component level and are average concentration values. The amount (mg) calculations represent the average total amount of each substance within the component.  
[See Glossary of Terms for more details.](#)

**Important Part Information**

There is a remote possibility the Customer Part Number (CPN) your company uses could reference more than one TI part number. This is due to two or more users (EMSI or subcontractors) using the same CPN for different TI part numbers. If this occurs, please check your Customer Part Number and cross reference it with the TI part number seen on this page.

**Product Content Methodology**

[For an explanation of the methods used to determine material weights. See Product Content Methodology](#)

**Material Declaration Certificate for Semiconductor IC Packaged Products**

TI certifies that the material content information provided by TI is representative and accurate to the best of their knowledge based on material information provided by its suppliers and their combination into finished IC packaged products. TI semiconductor products designated to be "Pb-free", "Green" or "RoHS Exempt" fully meets the latest EU RoHS Directive requirements along with other legislation as seen in the former JIG-101 list that has been transferred to the IEC 62474 database.

**Important Information/Disclaimer**

TI bases its material content information on information provided by third-party suppliers and has taken, and continues to take, reasonably diligent steps to provide any required or available information. TI may not have conducted destructive testing or chemical analysis on incoming materials and chemicals. TI and TI suppliers may consider certain information to be proprietary, and thus certain information may not be available for release by TI. The material content information is provided by TI "as is."

[For additional information, please contact TI customer support.](#)

[Signature: \(click here for a fuller statement with a signed certificate\)](#)

Name/Title: Hubie Payne, Vice President, Worldwide SC Quality  
 For further environmental statements, please go to [www.ti.com/ecoinfo](http://www.ti.com/ecoinfo)  
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**RoHS:** Means TI semiconductor products that are compliant with the current RoHS requirement that the maximum concentration values of the ten substances listed in RoHS Annex II do not exceed 0.1 % by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI semiconductor products labeled as "RoHS Compliant" are suitable for use in specified lead-free processes. TI may also reference these types of semiconductor products as "Pb-Free." These TI semiconductor products are also fully compliant with GADSL and the IEC 62474 database for electronic requirements.

**RoHS Exempt:** Means TI semiconductor products that contain lead (Pb) above the RoHS Annex II threshold, but that fall within one of the specific RoHS exemptions noted above or documented in <http://www.ti.com/lit/pdf/szzq088>

**Green:** Means the content of Chlorine (Cl) and Bromine (Br)-based flame retardants meet JS709B low halogen requirements of <=1 000ppm threshold; Antimony trioxide (Sb2O3) contained in halogen based flame retardant materials meets the <=1 000ppm threshold requirement; and Beryllium Oxide (BeO) is <=1000ppm.