

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: 06/09/2022

Details for "TLV74311PDBVR"

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)*
TLV74311PDBVR	SN	Level-1-260C-UNLIM	Ext-Mfg	DBV   5	2.9x1.6x1.45	19

\*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	0.016969	97.388659	973887	0.089462	895
Precious Metals	Gold	7440-57-5	0.000037	0.212351	2124	0.000195	2
Precious Metals	Palladium	7440-05-3	0.000418	2.39899	23990	0.002204	22
Sub-Total			<b>0.017424</b>	<b>100</b>	<b>1000000</b>	<b>0.091861</b>	<b>919</b>
<b>Die Attach Adhesive</b>							
Precious Metals	Silver	7440-22-4	0.063417	80.000252	800003	0.334341	3343
Thermoplastics	Epoxy	85954-11-6	0.015854	19.999748	199997	0.083584	836
Sub-Total			<b>0.079271</b>	<b>100</b>	<b>1000000</b>	<b>0.417925</b>	<b>4179</b>
<b>Lead Frame</b>							
Copper and Its Alloys	Copper	7440-50-8	6.632428	97.535706	975357	34.96684	349668
Copper and Its Alloys	Iron	7439-89-6	0.153136	2.252	22520	0.807349	8073
Copper and Its Alloys	Phosphorus	7723-14-0	0.001496	0.022	220	0.007887	79
Precious Metals	Silver	7440-22-4	0.004304	0.063294	633	0.022691	227
Zinc and Its Alloys	Zinc	7440-66-6	0.008636	0.127	1270	0.04553	455
Sub-Total			<b>6.8</b>	<b>100</b>	<b>1000000</b>	<b>35.850297</b>	<b>358503</b>
<b>Lead Frame Plating</b>							
Other Nonferrous Metals and Alloys	Tin	7440-31-5	0.04	100	1000000	0.210884	2109
Sub-Total			<b>0.04</b>	<b>100</b>	<b>1000000</b>	<b>0.210884</b>	<b>2109</b>
<b>Mold Compound</b>							
Other Inorganic Materials	Fused Silica	60676-86-0	10.29959	86.849999	868500	54.300493	543005
Other Organic Materials	Proprietary Non Halide Flame Retardant	Trade Secret	0.059295	0.499998	5000	0.312609	3126
Other Plastics and Rubber	Carbon Black	1333-86-4	0.017789	0.150004	1500	0.093785	938
Thermoplastics	Epoxy	85954-11-6	1.482382	12.5	125000	7.81527	78153
Sub-Total			<b>11.859056</b>	<b>100</b>	<b>1000000</b>	<b>62.522158</b>	<b>625222</b>
<b>Semiconductor Device</b>							
Ceramics / Glass	Doped Silicon	7440-21-3	0.172014	100	1000000	0.906875	9069
Sub-Total			<b>0.172014</b>	<b>100</b>	<b>1000000</b>	<b>0.906875</b>	<b>9069</b>
<b>Total</b>			<b>18.967765</b>			<b>100</b>	<b>1000000</b>

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's 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)  
 Created on: 06/09/2022

**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.