

Supplier Name: Texas Instruments Inc. (DUNS# 00-732-1904)
 Contact Info: ti.com/support
 Form/Declaration Type: Distribute - RoHS and IEC 62474 DB
 Created on: 05/09/2022

Details for "OPA2690I-14DRG4"

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)*
OPA2690I-14DRG4	NIPDAU	Level-2-260C-1 YEAR	TI MALAYSIA A/T	D 14	3.91X8.65X1.58	150.3

*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
Bond Wire							
Other Nonferrous Metals and Alloys	Calcium	7440-70-2	0.000001	0.000472	5	0.000001	0
Other Nonferrous Metals and Alloys	Yttrium	7440-65-5	0.000001	0.000472	5	0.000001	0
Precious Metals	Gold	7440-57-5	0.212082	99.998114	999981	0.141091	1411
Precious Metals	Silver	7440-22-4	0.000002	0.000943	9	0.000001	0
Sub-Total			0.212086	100	1000000	0.141093	1411
Die Attach Adhesive							
Other Inorganic Materials	Silica	7631-86-9	0.006394	1.99985	19998	0.004254	43
Precious Metals	Silver	7440-22-4	0.22061	69.000138	690001	0.146764	1468
Thermoplastics	Epoxy	85954-11-6	0.09272	29.000013	290000	0.061683	617
Sub-Total			0.319724	100	1000000	0.212701	2127
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	44.02932	97.41	974100	29.291132	292911
Copper and Its Alloys	Iron	7439-89-6	1.0848	2.4	24000	0.721679	7217
Copper and Its Alloys	Phosphorus	7723-14-0	0.01356	0.03	300	0.009021	90
Other Nonferrous Metals and Alloys	Lead	7439-92-1	0.01356	0.03	300	0.009021	90
Other Nonferrous Metals and Alloys	Tin	7440-31-5	0.01356	0.03	300	0.009021	90
Zinc and Its Alloys	Zinc	7440-66-6	0.0452	0.1	1000	0.03007	301
Sub-Total			45.2	100	1000000	30.069944	300699
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	0.644914	95.120059	951201	0.429038	4290
Precious Metals	Gold	7440-57-5	0.005288	0.779941	7799	0.003518	35
Precious Metals	Palladium	7440-05-3	0.027798	4.1	41000	0.018493	185
Sub-Total			0.678	100	1000000	0.451049	4510
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	88.45959	86	860000	58.849002	588490
Other Plastics and Rubber	Carbon Black	1333-86-4	0.30858	0.3	3000	0.205287	2053
Other Plastics and Rubber	Organic Phosphorus	1330-78-5	0.56573	0.55	5500	0.37636	3764
Thermoplastics	Epoxy	85954-11-6	13.526088	13.15	131500	8.998423	89984
Sub-Total			102.859988	100	1000000	68.429072	684291
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	1.046413	100	1000000	0.696141	6961
Sub-Total			1.046413	100	1000000	0.696141	6961
Total			150.316211			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: \(click here for a fuller statement with a signed certificate\)](#)

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 For further environmental statements, please go to 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.