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:	08/28/2022

Details for "DS90LV019TM"

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)*
DS90LV019TM	SNPB	Level-1-235C-UNLIM	Texas Instruments Electronics	D 14	8.7 x 3.9 x 1.75	150.7

*Total Device Mass

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

Environmental Ratings Information

	IEC 02474 DB
No Affected Yes	Affected

Component Information

ComponeSubtanceCAS NumberAmount (m)Percenda %opmPercenda %opercenda %opercend	Component	Substance	CAS Number	Amount (mg)	Homogeneous Material Level		Component Level	
Bond Wire Selection Selection <t< th=""><th>Percentage %</th><th>ppm</th><th>Percentage %</th><th>ppm</th></t<>					Percentage %	ppm	Percentage %	ppm
Copper and its Alloys Copper 7440-50-8 0.0606 99.99335 999983 0.040215 544 Sub-Total 0.00010 0.00155 17 0.000001 0.0402215 44 Die Atach Adhesive	Bond Wire							
Precious Metals Silver 7440-22-4 0.000001 0.00165 17 0.000001 Die Attach Adhesive - 0.066001 100 1000000 0.040215 44 Die Attach Adhesive - - - - - 22 Thermoplatics Epoxy 859541-6 0.011456 24.99994 24.9999 0.073963 7.5 Sub-Total - 0.044825 100 1000000 0.028583 29 Capper and its Alloys Copper 7440-50.8 41.60034 96.7 967000 27.606323 27600 Copper and its Alloys Iron 7439-89-6 1.023876 2.38 0.300 0.00555 8 Copper and its Alloys Precious Metals Silver 7440-22-4 0.0313254 0.77 77700 0.021823 212 Capper and its Alloys Zinc 7440-22-4 0.0313254 0.77 77700 0.0219823 212 Stotal Ca 7440-22-4 0.0313254 0.77	Copper and Its Alloys	Copper	7440-50-8	0.0606	99.99835	999983	0.040215	402
Sub-Total 0.0666601 100 1000000 0.040215 44 Die Attachswe	Precious Metals	Silver	7440-22-4	0.000001	0.00165	17	0.000001	0
Die Atzch Adhesive Scher 7440-22-4 0.33459 7500056 75001 0.22189 2 Precious Metals Epoxy 85954-11-6 0.111456 24.99994 249993 0.073963 7 Sub-Total 0.0445825 100 100000 0.29289 7 Sub-Total Copper and its Alloys Copper and its Alloys 967000 2.7.663233 2760 Copper and its Alloys Iron 74398-6 1.023876 2.38 23800 0.679452 7 Copper and its Alloys Iron 74398-6 0.01296 0.03 300 0.008565 7 Copper and its Alloys Iron 7449-22-4 0.331254 0.77 7700 0.2189421 284 Sub-Total Iron 7449-22-4 0.051624 0.12 1000 0.034285 3 300 0.034285 328 Sub-Total Izo Izo Alta Alloys <	Sub-Total			0.060601	100	1000000	0.040215	402
Predox Metals Silver 7440-22-4 0.334369 75.000056 75.0001 0.22189 222 Thermoplastics Epoxy 85954-11-6 0.111456 24.99994 249999 0.073863 77 Lead Frame	Die Attach Adhesive							
Thermoplastics Epoxy 85954-11-6 0.111456 24.999944 24.9999 0.073983 7.7 Sub-Total 0.445825 100 100000 0.23983 29 Lead Frame -	Precious Metals	Silver	7440-22-4	0.334369	75.000056	750001	0.22189	2219
Sub-Total 0.445825 100 1000000 0.295853 299 Lead Frame	Thermoplastics	Ероху	85954-11-6	0.111456	24.999944	249999	0.073963	740
Lead Frame Copper and its Alloys Copper (2000) 27.606232 27.60723 27.606232 27.60723 27.60723 27.60723 27.60723 28.402 10.0 10.00000 27.63623 27.60723 27.60723 20.60723 27.60723 27.60723 20.60723 27.60723 27.60723 20.60723 10.600000 1.600150 10	Sub-Total			0.445825	100	1000000	0.295853	2959
Copper and its Alloys Copper on M45 Selos 44.60034 96.7 967000 27.66323 27.60 Copper and its Alloys Iron 7439.89-6 1.023876 2.38 23800 0.679432 27.60 Copper and its Alloys Phosphorus 7723.14-0 0.012966 0.03 300 0.008565 1 Precious Metals Silver 7440-22.4 0.331254 0.77 7700 0.218382 21 Sub-Total 440-66-6 0.051624 0.12 12000 0.034228 21 Cher Nonferrous Metals and Alloys Lead 749-92-1 0.24 15 150000 0.159266 155 Other Nonferrous Metals and Alloys Lead 749-92-1 0.24 15 150000 0.159266 155 Other Nonferrous Metals and Alloys Lead 740-93-5 1.36 85 850000 0.902507 900 Other Nonferrous Metals and Alloys Kered Silica 60676-86-0 91.806725 89 890000 60.923688 60927 6	Lead Frame							
Copper and its Alloys Iron 7439-89-6 1.023876 2.38 23800 0.67392 677 Copper and its Alloys Phosphorus 7723-14-0 0.012906 0.03 300 0.00856 2.12 Precious Metals Silver 7440-62-6 0.031254 0.77 7700 0.213823 2.11 Zinc and its Alloys Zinc 7440-66-6 0.0551624 0.12 1.020 0.034288 3.3 Sub-Total 43.02 100 1000000 28.548421 284 Lead Frame Plating 43.02 103 150000 0.159266 155 Other Nonferrous Metals and Alloys Inn 7439-92-1 0.24 15 150000 0.092507 195 Sub-Total in 40-31-5 1.16 100 1000000 1.061773 1065 Sub-Total in 1.6 100 1000000 2.05308 60922 60922 60922 60922 60922 60922 60922 60922	Copper and Its Alloys	Copper	7440-50-8	41.60034	96.7	967000	27.606323	276063
Copper and its Alloys Phosphorus 7723-14-0 0.012906 0.03 300 0.008565 1 Precious Metals Silver 7440-22-4 0.331254 0.77 7700 0.219823 21 Can and its Alloys Zinc 7440-66-6 0.051624 0.12 1200 0.034228 33 Sub-Total 440-66-6 0.051624 0.12 1200 0.034228 33 Sub-Total 440-66-6 0.051624 0.12 1200 0.034228 33 Coher Nonferrous Metals and Alloys Lead Frame Plating 15 150000 0.159266 155 Other Nonferrous Metals and Alloys Tin 7449-92-1 0.24 15 150000 0.059266 155 Other Nonferrous Metals and Alloys Tin 7449-92-5 1.36 85 850000 0.050270 900 Other Nonferrous Metals and Alloys Fued Silica 60676-86-0 91.806725 89 890000 6.923688 60923 60923688 60923	Copper and Its Alloys	Iron	7439-89-6	1.023876	2.38	23800	0.679452	6795
Predous Metals Silver 7440-22:4 0.331254 0.77 7700 0.219823 211 Zinc and Its Alloys Zinc 7440-66-6 0.051624 0.12 1200 0.039238 231 Sub-Total 43.02 100 1000000 28.548421 2854 Lead Frame Plating 0.24 15 150000 0.159266 155 Other Nonferrous Metals and Alloys Tin 7440-31-5 1.36 85 850000 0.902507 905 Sub-Total 1.6 100 1000000 1.06173 106 1000000 1.06173 106 Mold Compound 1.6 100 1000000 6.0223688 60922 0.024 15 106.0126	Copper and Its Alloys	Phosphorus	7723-14-0	0.012906	0.03	300	0.008565	86
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Precious Metals	Silver	7440-22-4	0.331254	0.77	7700	0.219823	2198
Sub-Total 43.02 100 1000000 28.548421 2854 Lead Frame Pating	Zinc and Its Alloys	Zinc	7440-66-6	0.051624	0.12	1200	0.034258	343
Lead Frame Plating Other Nonferrous Metals and Alloys Lead 7439-92-1 0.24 15 150000 0.159266 15 Other Nonferrous Metals and Alloys Tin 7449-31-5 1.36 85 850000 0.902507 90. Sub-Total 1.6 100 1000000 1.061773 106. Mold Compound	Sub-Total			43.02	100	1000000	28.548421	285484
Other Nonferrous Metals and Alloys Lead 7439-92-1 0.24 15 150000 0.159266 155 Other Nonferrous Metals and Alloys Tin 7440-31-5 1.36 85 850000 0.902507 190 Sub-Total 1.6 100 1000000 1.061773 190 Mold Compound	Lead Frame Plating							
Other Nonferrous Metals and Alloys Tin 7440-31-5 1.36 85 850000 0.902507 903 Sub-Total 1.6 1.00 100000 1.061773 903 Sub-Total 1.6 1.00 100000 1.061773 903 Mold Compound	Other Nonferrous Metals and Alloys	Lead	7439-92-1	0.24	15	150000	0.159266	1593
Sub-Total 100 1000000 1.061773 1061 Mod Compound Mode Select Compound 0 0.061773 0.061773 0.061773 0.061773 0.061773 0.061773 0.061773 0.061773 0.061773 0.061773 0.061773 0.061773 0.061773 0.061773 0.061773 0.061773 0.06173 0.06173 0.06173 0.06923 0.06023688 6.0923 0.06923 0.06023688 6.0923 0.06023688 6.0923 0.0623 0.023588 6.0923 0.0623 0.023588 6.0923 0.0623 0.023588 6.0923 0.0623 0.023588 6.0923 0.0623 0.023588 6.0923 0.023588 6.0923 0.023588 6.0923 0.023588 6.0923 0.023588 6.0923 0.023588 6.0923 0.0923 5.475827 5.475827 5.475827 5.475827 5.475827 5.475827 5.475827 5.475827 5.475827 5.475827 5.475827 5.475827 5.475827 5.475827 5.475827 5.475827 5.475827 5.475827	Other Nonferrous Metals and Alloys	Tin	7440-31-5	1.36	85	850000	0.902507	9025
Mold compound Under Materials sued Silica 6676-86-0 91.806725 8 800000 60.922688 60	Sub-Total			1.6	100	1000000	1.061773	10618
Other morganic Materials Fused Silica 60676-86-0 91.806725 89 890000 60.932688 60922 Other Nonferrous Metals and Alloys Metal Hydroxide Trade Secret 3.094609 3 30000 2.05368 20922 Thermoplastics Epoxy 8595411-6 8.25229 8 800000 5.476287 2557 Sub-Total 103.153624 100 1000000 68.453582 68435 Semiconductor Device Ceramics / Glass Doped Silicon 7440-21-3 2.411295 100 1000000 1.600155 1600 Sub-Total 2 2.411295 100 1000000 1.600155 1600 Sub-Total 10.940-21-3 2.411295 100 1000000 1.600155 1600 Sub-Total 10.940-21-3 150.691345 100 1000000 1.600155 1600	Mold Compound							
Other nous Metals and Alloys Metal Hydroxide Trade Secret 3.094609 3 30000 2.03508 2053 Thermoplastics Epoxy 85954.11-6 8.25229 8 80000 5.476287 5471 Sub-Total 103.15624 100 1000000 68.435582 68435 Semiconductor Device 2.411295 100 1000000 1.600155 1600 Sub-Total 2.411295 100 1000000 1.600155 1600 Sub-Total 2.411295 100 1000000 1.600155 1600 Sub-Total 10.15.061345 100 1000000 1.600155 1600	Other Inorganic Materials	Fused Silica	60676-86-0	91.806725	89	890000	60.923688	609237
Thermoplastics Epoxy 85954-11-6 8.25229 8 80000 5.476287 5471 Sub-Total 0 103.15362 100 068.45382 5471 Semiconductor Device	Other Nonferrous Metals and Alloys	Metal Hydroxide	Trade Secret	3.094609	3	30000	2.053608	20536
Sub-Total 100 1000000 68.45382 6845 Semiconductor Device Ceramics / Glass Doped Silicon 7440-21-3 2.411295 100 1000000 1.600155	Thermoplastics	Epoxy	85954-11-6	8.25229	8	80000	5.476287	54763
Semiconductor Device V V Ceramics / class Doped Silicon 7440-21-3 2.411295 1.00 1.000000 1.600155 1.600 Sub-Total 2.411295 1.00 1.000000 1.600155 1.600 1.600155 1.600 1.600155 1.600 1.600155 1.600 1.600155 1.600 1.600155 1.600 1.600155 1.600 1.600155 1.600 1.600155 1.600 1.600155 1.600 1.600155 1.600 1.600155 1.600155 1.600 1.600155 1.600 1.600155 1.600 1.600155 1.600 1.600155 1.600 1.600155 1.600 1.600155 1.600155 1.600 1.600155<	Sub-Total			103.153624	100	1000000	68.453582	684536
Ceramics / Glass Doped Silicon 7440-21-3 2.411295 100 1000000 1.600155 1600 Sub-Total Ceramics / Glass Ceramics / Glass 100 1000000 1.600155 1600 Total Ceramics / Glass Ceramics / Glass 100 1000000 1.600155 1600	Semiconductor Device	·						
Sub-Total 2.411295 100 1000000 1.600155 1600 Total 150.691345 100 10000000 10000000 10000000	Ceramics / Glass	Doped Silicon	7440-21-3	2.411295	100	1000000	1.600155	16002
Total 150.691345 100 100000	Sub-Total			2.411295	100	1000000	1.600155	16002
Total 150.691345 100 10000								
	Total			150.691345			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 (EMSIs 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

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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 Created on: 08/28/2022

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