Materials Declaration

Package	LQFP
Body Size	24 X 24 X 1.4
LeadCount	176
Option	Pb-free, Halide-free

Molding Compound

Substance	% of Compound	Weight (g)	PPM
Silica	86.91	1.29 E+00	652071
Epoxy and Phenol resin	12.78	1.90 E-01	95886
Carbon black	0.31	4.60 E-03	2326
Subtotal	100	1.48 E+00	750283

Leadframe

Substance	% of Leadframe	Weight (g)	PPM
Copper	96.20	4.26 E-01	215420
Nickel	3.00	1.33 E-02	6718
Silicon	0.65	2.88 E-03	1456
Magnesium	0.15	6.64 E-04	336
Subtotal	100	4.43 E-01	223929

Internal Leadframe Plating

Substance	% of Plating	Weight (g)	PPM
Silver	100	4.38 E-03	2218

External Leadframe Plating

Substance	% of Plating	Weight (g)	PPM
Tin	100	1.79 E-02	9056

Bond Wires

Substance	% of Wire	Weight (g)	PPM
Gold	99.99	4.37 E-03	2209

Chip

Substance	% of Chip	Weight (g)	PPM
Doped Silicon	100	2.01 E-02	10183

Die Attach

Substance	% of Die Attach	Weight (g)	PPM
Silver	72.4	3.04 E-03	1536
Epoxy compound	18.1	7.59 E-04	384
Anhydrides	6.8	2.85 E-04	144
Polymeric material	2.7	1.14 E-04	58
Subtotal	100.0	4.20 E-03	2122

Package Totals

Weight (g)	PPM
1.98 E+00	1000000

Molding Compound

Substance	PPM	Method
Lead	Not Detected	Draft IEC62321. ICP-OES.
Cadmium	Not Detected	Draft IEC62321. ICP-OES.
Mercury	Not Detected	Draft IEC62321. ICP-OES.
Chromium+6	Not Detected	Draft IEC62321. UV-VIS.
Polybrominated biphenyls (PBB)	Not Detected	Draft IEC62321. GC-MSD.
Polybrominated Diphenyl Ethers (PBDE)	Not Detected	Draft IEC62321. GC-MSD.

Die Attach Paste

Substance	PPM	Method
Lead	Not Detected	Draft IEC62321. ICP-OES.
Cadmium	Not Detected	Draft IEC62321. ICP-OES.
Mercury	Not Detected	Draft IEC62321. ICP-OES.
Chromium+6	Not Detected	Draft IEC62321. UV-VIS.
Polybrominated biphenyls (PBB)	Not Detected	Draft IEC62321. GC-MSD.
Polybrominated Diphenyl Ethers (PBDE)	Not Detected	Draft IEC62321. GC-MSD.

Note: The information provided in this declaration are true to the best of ADI's knowledge.
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ANALOG DEVICES

ADI Proprietary

Materials Declaration

Package	LQFP
Body Size	24 X 24 X 1.4
LeadCount	176
Option	with Pb, Halide-free

Molding Compound

Substance	% of Compound	Weight (g)	PPM
Silica	86.91	1.29 E+00	652071
Epoxy and Phenol resin	12.78	1.90 E-01	95886
Carbon black	0.31	4.60 E-03	2326
Subtotal	100	1.48 E+00	750283

Leadframe

Substance	% of Leadframe	Weight (g)	PPM
Copper	96.20	4.26 E-01	215420
Nickel	3.00	1.33 E-02	6718
Silicon	0.65	2.88 E-03	1456
Magnesium	0.15	6.64 E-04	336
Subtotal	100	4.43 E-01	223929

Internal Leadframe Plating

Substance	% of Plating	Weight (g)	PPM
Silver	100	4.38 E-03	2218

External Leadframe Plating

Substance	% of Plating	Weight (g)	PPM
Tin	85	1.52 E-02	7698
Lead	15	2.69 E-03	1358
Subtotal	100	1.79 E-02	9056

Bond Wires

Substance	% of Wire	Weight (g)	PPM
Gold	99.99	4.37 E-03	2209

Chip

Substance	% of Chip	Weight (g)	PPM
Doped Silicon	100	2.01 E-02	10183

Die Attach

Substance	% of Die Attach	Weight (g)	PPM
Silver	72.4	3.04 E-03	1536
Epoxy compound	18.1	7.59 E-04	384
Anhydrides	6.79	2.85 E-04	144
Polymeric material	2.71	1.14 E-04	58
Subtotal	100	4.20 E-03	2122

Package Totals

Weight (g)	PPM
1.98 E+00	1000000

Molding Compound

Substance	PPM	Method
Lead	Not Detected	Draft IEC62321. ICP-OES.
Cadmium	Not Detected	Draft IEC62321. ICP-OES.
Mercury	Not Detected	Draft IEC62321. ICP-OES.
Chromium+6	Not Detected	Draft IEC62321. UV-VIS.
Polybrominated biphenyls (PBB)	Not Detected	Draft IEC62321. GC-MSD.
Polybrominated Diphenyl Ethers (PBDE)	Not Detected	Draft IEC62321. GC-MSD.

Die Attach Paste

Substance	PPM	Method
Lead	Not Detected	Draft IEC62321. ICP-OES.
Cadmium	Not Detected	Draft IEC62321. ICP-OES.
Mercury	Not Detected	Draft IEC62321. ICP-OES.
Chromium+6	Not Detected	Draft IEC62321. UV-VIS.
Polybrominated biphenyls (PBB)	Not Detected	Draft IEC62321. GC-MSD.
Polybrominated Diphenyl Ethers (PBDE)	Not Detected	Draft IEC62321. GC-MSD.

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