

Environmental Management and Materials Information

Product Content Information for: ADC0820CCN

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Qualifications [Top](#)

Lead-Free Qualified	No
REACH	Yes: 2014-12-17
RoHS Qualified	No
Green	No
Moisture Sensitivity Level	L1
Flammability Meets UL-94 (V-0 Rating)	Yes
Assembler Qualified	ATP

Package Description [Top](#)

Package Code	P20-3
Package Type	PDIP(N) *
Package Description	Plastic Dual-In-Line, Narrow (0.3in)
Package Option	Standard
Footprint Area (mm²)	217.1
Body Size	.300"
Pin Count	20
Lead Form¹	TH
Unit Weight in Grams	1.44207

Chemical Composition Summary [Top](#)

[Maxim NIA/NIU Substance List \(PDF, 24k\)](#)

Substance	CAS Number		
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		Amount (grams)	% of Unit Weight
Aluminum (Al)	7429-90-5	0	0
Antimony (Sb ₂ O ₃)	1309-64-4	0.0284	1.96939
BCB Resin		0	0
Bromine (Br)	7726-95-6	0.0095	0.65878
Carbon (C)	7440-44-0	0	0
Carbon Black	1333-86-4	0	0
Ceramic (BaTiO ₃)	12047-27-7	0	0
Chromium (Cr)	7440-47-3	0	0
Cobalt (Co)	7440-48-4	0	0
Copper (Cu)	7440-50-8	0.4306	29.85985
Gold (Au)	7440-57-5	0.0011	0.07628
Indium (In)	7440-74-6	0	0
Insulator (Polyimide)		0	0
Insulator Film		0	0
Iron (Fe)	7439-89-6	0.0104	0.72119
FeO ₂	12411-15-36	0	0
Lead (Pb)	7439-92-1	0.00496	0.34395
Magnesium (Mg)	7439-95-4	0	0
Manganese (Mn)	7439-96-5	0	0
MnO ₃		0	0
Nickel (Ni)	7440-02-0	0	0
NiPdAu		0	0
Nickel-V (NiV)		0	0
Palladium (Pd)	7440-05-3	0	0
Phosphorus (P)	7723-14-0	0	0
Silica (SiO ₂)	11126-22-0	0.6533	45.30293
Silicon (Si)	7440-21-3	0.016	1.10952
Silver (Ag)	7440-22-4	0.00411	0.28501
Solder Mask		0	0
Solder Paste		0	0
Spheron Polymer Passivation		0	0
Sulfur (S)	7704-34-9	0	0
Tin (Sn)	7440-31-5	0.0281	1.94859
Titanium (Ti)	7440-32-6	0	0
Titanium-W (TiW)		0	0

Tungsten (W)	7440-33-7	0	0
Vanadium (V)	7440-62-2	0	0
Zinc (Zn)	7440-66-6	0.0005	0.03467
ZnO	1314-13-2	0	0
Zirconium (Zr)	7440-67-7	0	0

Detailed Package Component Data [Top](#)

Bond Wire Components

Summary

Component Weight 0.0011

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Gold (Au)	0.0011	100.00000	0.07628
Aluminum (Al)	0	0	0

Die Attach Epoxy Components

Summary

Die Attach Material AB8390A

Component Weight 0.00511

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Aromatic Amine		0	0
Copper (Cu)	0	0	0
Diester	0	0	0
Epoxy	0.001	19.56947	0.06934
Functionalized Ester	0	0	0
Functionalized Urethane	0	0	0
Indium (In)	0	0	0
Lactone	0	0	0
Lead (Pb)	0	0	0
Polymeric	0	0	0
Polyoxypropylenediamine	0	0	0
Resin	0	0	0
Silver Filler (Ag)	0.00411	80.43053	0.28501
Tin (Sn)	0	0	0
Other		0	0

Lead Finish/Plating Components**Summary**

Lead Finish Plating 85Sn/15Pb plate

Assembly Lead Finish Process

Component Weight 0.03306

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Lead (Pb)	0.00496	15.00302	0.34395
Tin (Sn)	0.0281	84.99698	1.94859
NiPdAu	0	0	0
Gold (Au)	0	0	0
Nickel (Ni)	0	0	0

Lead Frame Components**Summary**

Lead Frame Material Copper C194

Component Weight 0.4415

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Aluminum (Al)	0	0	0
Carbon (C)	0	0	0
Chromium (Cr)	0	0	0
Cobalt (Co)		0	0
Copper (Cu)	0.4306	97.53114	29.85985
Gold (Au)		0	0
Iron (Fe)	0.0104	2.35561	0.72119
Lead (Pb)		0	0
Magnesium (Mg)	ND	0	0
Manganese (Mn)		0	0
Nickel (Ni)	ND	0	0
Palladium (Pd)	0	0	0
Phosphorus (P)		0	0
Silicon (Si)		0	0
Silver (Ag)		0	0
Sulfur (S)	0	0	0
Tin (Sn)		0	0
Zinc (Zn)	0.0005	0.11325	0.03467

Zirconium (Zr)	0	0	0
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Mold Compound Components

Summary

Mold Material Sumitomo G600C

Resin Type OCN

Component Weight 0.9453

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Antimony (Sb ₂ O ₃)	0.0284	3.00434	1.96939
Bromine (Br)	0.0095	1.00497	0.65878
Carbon Black		0	0
Epoxy	0	0	0
Epoxy Cresol Novolac	0	0	0
Metal Hydroxide		0	0
Phenol Novolac		0	0
Silica (SiO ₂)	0.6533	69.11034	45.30293
Resin	0.2541	26.88036	17.62050
Other		0	0

Silicon Chip Components

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Silicon Chip	0.016	100	1.10952

Notes:

1. Lead Form: GW - Gull Wing, TH - Through Hole.
 2. Refer to product data sheet to confirm actual wire diameter.
 3. 'ND' means None Detected, negligible amount present.
- * This package may be remarked. If remarked, the package will contain additional homogeneous materials—inks—that are not listed in contents of this report.

This part is not qualified as lead-free.

Parts not currently qualified as lead-free may not have been qualified as such due to low demand. Also, some packages types cannot be produced as lead-free for technical reasons. If a customer requires that a package type "not qualified" as lead-free be manufactured and supplied, a request must be submitted to your Maxim sales contact person for approval. The navigation bar on the EMMI website contains information regarding the lead-free process (e.g. MSL's, Peak reflow Temperatures, JEDEC methods, frequently asked questions and answers, lead-free package tables, and status/qualification plans for particular package types qualified as lead-free or in the qualification process).

See a list of [packages qualified as lead-free](#).

This report was generated on 2015-06-20. For additional information, please visit the Maxim/Dallas Environmental Management and Materials Information website located at:

<http://www.maximintegrated.com/en/emmi>