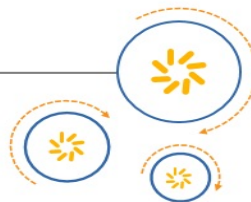




Qualcomm Technologies, Inc.



Product Material Declaration

PM660

80-VG590-331A Rev. A

04/04/2017

Submit technical questions to:

<https://support.cdmatech.com>

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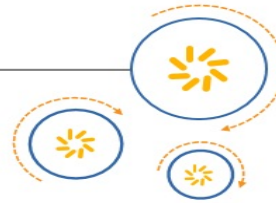
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**Qualcomm Technologies, Inc.
5775 Morehouse Drive
San Diego, CA 92121
U.S.A**



EU RoHS Definition

- For lead (Pb), Mercury (Hg), Hexavalent Chromium (Cr 6+), Polybrominated Biphenyls (PBB) and Polybrominated Diphenyl Ethers (PBDE) ≤ 1000 ppm or 0.1% by weight in any of the homogeneous materials; and
- For Cadmium Cd ≤ 100 ppm or 0.01% by weight in any of the homogeneous materials.

Qualcomm understands EU RoHS requires: Lead and other materials restricted in the EU RoHS Directive to be either (1) below all applicable substance thresholds as stated in EU RoHS or (2) covered by an applicable exemption.

EU RoHS implementing details are not fully defined and may change. Where a product is declared to meet EU RoHS requirements, it has been verified to be in conformance with 2011/65/EU as we currently understand the requirements.

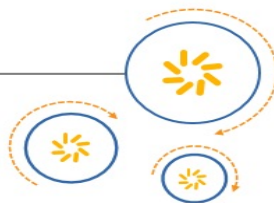
RoHS Material Declaration

Subject to the other statements in this Declaration, the product named in this Declaration complies with the substance thresholds as proposed by EU RoHS or an approved/pending exemption applies. We believe that the declaration we are providing regarding the chemical substances in our products is accurate. The declaration is based on information provided to us by our suppliers, other third parties and information in our existing records. We are not able to verify the accuracy or completeness of information provided to us by third parties. This Declaration shall not in any way be construed as altering the terms and conditions under which we supply any Qualcomm product to you. All rights and obligations with respect to any particular product provided by us to you are solely as defined in the definitive, written supply, sales and/or license agreement between our companies for such product.

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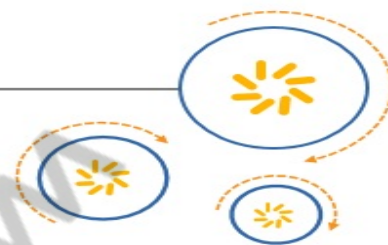
Revision History

| Revision | Date | Description of Change |
|----------|------------|-----------------------|
| A | 04/04/2017 | Initial Release |

Qualcomm
2019-08-19 20:33:55 PDT
songpeng@wind-mobi.com



Qualcomm Technologies, Inc.



Product Material Declaration

| | | | | | |
|--------------------------------------|--|-------------------------|--------|---------------|----------------------|
| Product Name | PM660 | MSL/Peak Body Temp (°C) | 3/260 | Date | 04-Apr-17 |
| Package Type | 219 WLP | JEDEC e | e1 | Assembly Site | AMKOR |
| Weight (g) | 0.027564 | Terminal Comp | SAC405 | Document No. | 80-VG590-331A Rev. A |
| EU RoHS Status | Meets all MCV requirements | China RoHS EPUP | NA | BrCl-free | Yes |
| Environmental Governance Declaration | EU REACH Regulation (EC) No 1907/2006 Annex 14 substances are not contained. REACH SVHC candidates are contained (see Product Content Information section). IEC62474 "Mandatory" reporting required substances are not contained. BrCl-free product (contains <900 ppm Br or Cl and <1500 ppm combined in each homogeneous material). Pb-free product. | | | | |
| Applicable EU Exemption(s) | | | | | |

Product Content Information

Total Mass (g) = 0.027564

| Material Name | Material Wt. in Product (g) | Substance Name | CAS No. | Substance Wt. (g) | Substance Wt. in Material (%) | Substance Wt. in Product (%) |
|---------------------|-----------------------------|----------------|-------------|-------------------|-------------------------------|------------------------------|
| Backside Lamination | 0.001040 | Carbon Black | 1333-86-4 | 0.000022568 | 2.1700 | 0.0819 |
| | | Epoxy Resin A | Proprietary | 0.000226096 | 21.7400 | 0.8203 |

| Material Name | Material Wt. in Product (g) | Substance Name | CAS No. | Substance Wt. (g) | Substance Wt. in Material (%) | Substance Wt. in Product (%) |
|----------------------|-----------------------------|--------------------------------|-------------|-------------------|-------------------------------|------------------------------|
| | | Silica Fused | 60676-86-0 | 0.000565240 | 54.3500 | 2.0507 |
| | | Acrylic Resin | Proprietary | 0.000226096 | 21.7400 | 0.8203 |
| Polyimide Layer | 0.000400 | N-Methyl-2-Pyrrolidone | 872-50-4 | 0.000000084 | 0.0210 | 0.0003 |
| | | Methanol | 67-56-1 | 0.000013800 | 3.4500 | 0.0501 |
| | | Photosensitive Polyimide Resin | Proprietary | 0.000165520 | 41.3800 | 0.6005 |
| | | Methacrylate Monomer | Proprietary | 0.000027600 | 6.9000 | 0.1001 |
| | | Proprietary Ingredient(s) | Proprietary | 0.000192996 | 48.2490 | 0.7002 |
| Redistribution Layer | 0.001067 | Copper | 7440-50-8 | 0.001067000 | 100.0000 | 3.8710 |
| Redistribution Layer | 0.000013 | Titanium | 7440-32-6 | 0.000013000 | 100.0000 | 0.0472 |
| Si Die(s) | 0.018580 | Silicon | 7440-21-3 | 0.018580000 | 100.0000 | 67.4077 |
| Solder Balls | 0.006460 | Tin | 7440-31-5 | 0.006169300 | 95.5000 | 22.3820 |
| | | Copper | 7440-50-8 | 0.000032300 | 0.5000 | 0.1172 |
| | | Silver | 7440-22-4 | 0.000258400 | 4.0000 | 0.9375 |
| UBM | 0.000004 | Copper | 7440-50-8 | 0.000003600 | 100.0000 | 0.0131 |
| UBM | 2.0000E-8 | Titanium | 7440-32-6 | 0.000000020 | 100.0000 | 7.26E-5 |