**URL** for Additional Information

PART INFORMATION

Mfg Item Number

Mfg Item Name

FC-PBGA 624 21\*21\*2 P0.8

SUPPLIER Company Name Freescale Semiconductor Inc Company Unique ID 14-141-7928 Response Date 2018-01-08 Response Document ID 00A2K00226D002A1.8 Contact Name Freescale Semiconductor Inc Contact Title Product Technical Support **Contact Phone** 1-800-521-6274 Contact Email support@freescale.com **Authorized Representative** Daniel Binyon Representative Title **EPP Customer Response** Representative Phone 512-895-3406 Representative Email eppanlst@freescale.com

DECLARATION

EU RoHS
Pb Free
Yes
HalogenFree
Plating Indicator
EU RoHS Exemption(s)

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MANUFACTURING Mfg Item Number MCIMX6Q7CVT08AC Mfg Item Name FC-PBGA 624 21\*21\*2 P0.8 Version ALL Weight 3.327500 UoM EACH Unit Volume J-STD-020 MSL Rating 3 Peak Processing Temperature 260 C Max Time at Peak Temperature 40 seconds Number of Processing Cycles 3

| RoHS                                  |  |  |  |  |  |  |  |  |  |
|---------------------------------------|--|--|--|--|--|--|--|--|--|
| RoHS Directive                        | 2011/65/EU   |  |  |  |  |  |  |  |  |
| RoHS Definition                       | RoHS Definition: Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE) and quantity limit of 0.01% by mass (100 PPM) of homogeneous material of Cadmium  |  |  |  |  |  |  |  |  |
| RoHS Legal Definition                 | Please indicate whether any homogeneous material (as defined by the RoHS Directive, EU 2011/65/EU and implemented by the laws of the European Union member states) of the part(s) identified on this form contains lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls and/or polybrominated diphenyl ethers (each a RoHS restricted substance) in excess of the applicable quantity limit, please indicate below which, if any, RoHS exemption you believe may apply. If the part is an assembly with lower level components, the declaration shall encompass all such components. Supplier certifies that it gathered the information it provides in this form using appropriate methods to ensure its accuracy and that such information is true and correct to the best of its knowledge and belief, as of the date that Supplier completes this form. Supplier acknowledges that Company will rely on this certification in determining the compliance of its products with European Union member state laws that implement the RoHS Directive. Company acknowledges that Supplier may have relied on information provided by others in completing this form, and that Supplier may not have independently verified such information. However, in situations where Supplier has not independently verified information provided by others, Supplier agrees that, at a minimum, its suppliers have provided certifications regarding their contributions to the part(s), and those certifications are at least as comprehensive as the certification in this paragraph. If the Company and the Supplier enter into a written agreement with respect to the identified part(s), the terms and conditions of that agreement, including any warranty rights and/or remedies provided as part of that agreement, will be the sole and exclusive source of the Suppliers liability and the Companys remedies for issues that arise regarding information the Supplier provides in this form. In the absence of such written agreement, the warranty rights and/or remedies of Suppliers Standard Terms and Co |  |  |  |  |  |  |  |  |
| RoHS Declaration                      | 1 - Item(s) do not contain RoHS restricted substances per the definition above   |  |  |  |  |  |  |  |  |
| Supplier Acceptance                   | Accepted   |  |  |  |  |  |  |  |  |
| Signature                             | Daniel Binyon  |  |  |  |  |  |  |  |  |
| Exemption List Version                | 2012/51/EU   |  |  |  |  |  |  |  |  |
| List of Freescale Accepted Exemptions | 6(a) : Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0.35% lead by weight   |  |  |  |  |  |  |  |  |
| Exemptions                            | 6(b): Lead as an alloying element in aluminium containing up to 0.4% lead by weight  |  |  |  |  |  |  |  |  |
|                                       | 6(c): Copper alloy containing up to 4% lead by weight  |  |  |  |  |  |  |  |  |
|                                       | 7(a): Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead)   |  |  |  |  |  |  |  |  |
|                                       | 7(b): Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission, and network management for telecommunications   |  |  |  |  |  |  |  |  |
|                                       | 7(c)-I : Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound  |  |  |  |  |  |  |  |  |
|                                       | 7(c)-II: Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher  |  |  |  |  |  |  |  |  |
|                                       | 7(c)-III: Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC   |  |  |  |  |  |  |  |  |
|                                       | 7(c)-IV: Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors  |  |  |  |  |  |  |  |  |
|                                       | 15: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages  |  |  |  |  |  |  |  |  |

| Homogeneous Material           | Weight | SubstanceClass                           | Substance  | CAS        | Exemption | SubstanceWeight | UoM | SubPart | SubPart% | ARTICLEPPM | ARTICLE% |
|--------------------------------|--------|--|--|------------|-----------|-----------------|-----|---------|----------|------------|----------|
| Gel Die Encapsulant            | 0.012  |  |  |            |           |                 |     | PPM     |          |            |          |
| Gel Die Encapsulant            | 0.012  | Metals                                   | Aluminum, metal  | 7429-90-5  |           | 0.0084          | g   | 700000  | 70       | 2524       | 0.2524   |
| Gel Die Encapsulant            |        | Solvents, additives, and other materials | Siloxanes and silicones, di-Me, vinyl group-terminated   | 68083-19-2 |           | 0.0012          | g   | 100000  | 10       | 360        | 0.036    |
| Gel Die Encapsulant            |        | Metals                                   | Zinc oxide   | 1314-13-2  |           | 0.0012          | g   | 150000  | 15       | 540        | 0.054    |
| Gel Die Encapsulant            |        | Solvents, additives, and other materials | Proprietary Material-Other miscellaneous substances.   | 1014-10-2  |           | 0.00036         | g   | 30000   | 3        | 108        | 0.0108   |
| Gel Die Encapsulant            |        | Solvents, additives, and other materials | Dimethyl Cyclosiloxanes  | 70900-21-9 |           | 0.00036         | g   | 10000   | 1        | 36         | 0.0036   |
| Gel Die Encapsulant            |        | Solvents, additives, and other materials | Dimethyl,methyl hydrogen siloxane  | 68037-59-2 |           | 0.00012         | g   | 10000   | 1        | 36         | 0.0036   |
| Underfill                      | 0.012  | Solvents, additives, and other materials | Differry, fredity frydrogen siloxafie  | 00037-39-2 |           | 0.00012         | g   | 10000   | 1        | 30         | 0.0030   |
| Underfill                      | 0.012  | Solvents, additives, and other materials | 4,4'-Diamino-3,3'-diethyl-diphenylmethane  | 19900-65-3 |           | 0.00132         | g   | 110000  | 11       | 306        | 0.0396   |
| Underfill                      |        | Bismuth/Bismuth Compounds                | Bismuth nitrate  | 10361-44-1 |           | 0.000132        | g   | 1000    | 0.1      | 3          | 0.0003   |
| Underfill                      |        | Bismuth/Bismuth Compounds                | Bismuth trioxide   | 1304-76-3  |           | 0.000096        | g   | 8000    | 0.8      | 28         | 0.0028   |
| Underfill                      |        | Plastics/polymers                        | 1,6-Bis(2,3-epoxypropoxy) naphthalene  | 27610-48-6 |           | 0.00168         | g   | 140000  | 14       | 504        | 0.0504   |
| Underfill                      |        | Plastics/polymers                        | Phenolic Polymer Resin, Epikote 155  | 9003-36-5  |           | 0.0010          | g   | 100000  | 10       | 360        | 0.036    |
| Underfill                      |        | Solvents, additives, and other materials | Carbon Black   | 1333-86-4  |           | 0.00012         | g   | 1000    | 0.1      | 3          | 0.0003   |
| Underfill                      |        | Plastics/polymers                        | 4,4'-lsopropylidenediphenol-1-chloro-2,3-epoxypropane  | 25068-38-6 |           | 0.00048         | g   | 40000   | 4        | 144        | 0.0144   |
|                                |        | 1.1                                      | concentrate  |            |           |                 | 9   |         | *        |            |          |
| Underfill                      |        | Glass                                    | Silica, vitreous   | 60676-86-0 |           | 0.0072          | g   | 600000  | 60       | 2163       | 0.2163   |
| Bonding Agent                  | 0.0206 |  |  |            |           |                 | g   |         |          |            |          |
| Bonding Agent                  |        | Solvents, additives, and other materials | Other organic compounds.   | -          |           | 0.0000309       | g   | 1500    | 0.15     | 9          | 0.0009   |
| Bonding Agent                  |        | Solvents, additives, and other materials | [3-(2,3-epoxypropoxy)propyl]trimethoxysilane   | 2530-83-8  |           | 0.0000618       | g   | 3000    | 0.3      | 18         | 0.0018   |
| Bonding Agent                  |        | Solvents, additives, and other materials | Siloxanes and silicones, di-Me, vinyl group-terminated   | 68083-19-2 |           | 0.011124        | g   | 540000  | 54       | 3343       | 0.3343   |
| Bonding Agent                  |        | Solvents, additives, and other materials | Other siloxanes and silicones  | -          |           | 0.000618        | g   | 30000   | 3        | 185        | 0.0185   |
| Bonding Agent                  |        | Glass                                    | Silica, crystalline - quartz (SiO2)  | 14808-60-7 |           | 0.00618         | g   | 300000  | 30       | 1857       | 0.1857   |
| Bonding Agent                  |        | Solvents, additives, and other materials | Other miscellaneous substances (less than 5%).   | -          |           | 0.00000412      | g   | 200     | 0.02     | 1          | 0.0001   |
| Bonding Agent                  |        | Solvents, additives, and other materials | Dimethyl,methyl hydrogen siloxane  | 68037-59-2 |           | 0.000824        | g   | 40000   | 4        | 247        | 0.0247   |
| Bonding Agent                  |        | Solvents, additives, and other materials | Silicic acid sodium salt hydrolysis products with chlorotrimethylsilane and dichloroethenylmethylsil | 68584-83-8 |           | 0.000927        | g   | 45000   | 4.5      | 278        | 0.0278   |
| Bonding Agent                  |        | Glass                                    | Silylated silica   | 68909-20-6 |           | 0.000824        | g   | 40000   | 4        | 247        | 0.0247   |
| Bonding Agent                  |        | Metals                                   | Other platinum compounds   | -          |           | 0.00000618      | g   | 300     | 0.03     | 1          | 0.0001   |
| Solder Balls - Lead Free       | 0.3172 |  |  |            |           |                 | g   |         |          |            |          |
| Solder Balls - Lead Free       |        | Metals                                   | Copper, metal  | 7440-50-8  |           | 0.01441833      | g   | 45455   | 4.5455   | 4333       | 0.4333   |
| Solder Balls - Lead Free       |        | Metals                                   | Silver, metal  | 7440-22-4  |           | 0.00940308      | g   | 29644   | 2.9644   | 2825       | 0.2825   |
| Solder Balls - Lead Free       |        | Metals                                   | Tin, metal   | 7440-31-5  |           | 0.29337859      | g   | 924901  | 92.4901  | 88167      | 8.8167   |
| Cap/Cover                      | 2.0062 |  |  |            |           |                 | g   |         |          |            |          |
| Cap/Cover                      |        | Metals                                   | Copper, metal  | 7440-50-8  |           | 1.986138        | g   | 990000  | 99       | 596909     | 59.6909  |
| Cap/Cover                      |        | Nickel (external applications only)      | Nickel   | 7440-02-0  |           | 0.020062        | g   | 10000   | 1        | 6029       | 0.6029   |
| Organic Substrate              | 0.9216 |  |  |            |           |                 | g   |         |          |            |          |
| Organic Substrate              |        | Metals                                   | Barium sulfate   | 7727-43-7  |           | 0.01482117      | g   | 16082   | 1.6082   | 4454       | 0.4454   |
| Organic Substrate              |        | Metals                                   | Copper, metal  | 7440-50-8  |           | 0.30415195      | g   | 330026  | 33.0026  | 91405      | 9.1405   |
| Organic Substrate              |        | Plastics/polymers                        | Epikote 862  | 28064-14-4 |           | 0.08456233      | g   | 91756   | 9.1756   | 25413      | 2.5413   |
| Organic Substrate              |        | Plastics/polymers                        | Formaldehyde, polymer with 2-methylphenol, glycidyl ether  | 64425-89-4 |           | 0.02296259      | g   | 24916   | 2.4916   | 6900       | 0.69     |
| Organic Substrate              |        | Lead/Lead Compounds                      | Lead   | 7439-92-1  |           | 0.0003456       | g   | 375     | 0.0375   | 103        | 0.0103   |
| Organic Substrate              |        | Plastics/polymers                        | Phenol, polymer with formaldehyde  | 9003-35-4  |           | 0.04617769      | g   | 50106   | 5.0106   | 13877      | 1.3877   |
| Organic Substrate              |        | Glass                                    | Fibrous-glass-wool   | 65997-17-3 |           | 0.28283628      | g   | 306897  | 30.6897  | 84999      | 8.4999   |
| Organic Substrate              |        | Glass                                    | Silicon dioxide  | 7631-86-9  |           | 0.02424269      | g   | 26305   | 2.6305   | 7285       | 0.7285   |
| Organic Substrate              |        | Metals                                   | Tin, metal   | 7440-31-5  |           | 0.00058798      | g   | 638     | 0.0638   | 176        | 0.0176   |
| Organic Substrate              |        | Solvents, additives, and other materials | Other Aromatic carbonyl compounds  | -          |           | 0.00237957      | g   | 2582    | 0.2582   | 715        | 0.0715   |
| Organic Substrate              |        | Metals                                   | Aluminum Hydroxide   | 21645-51-2 |           | 0.13853215      | g   | 150317  | 15.0317  | 41632      | 4.1632   |
| Pb-free Bumped Semiconductor D | 0.0379 |  |  |            |           |                 | g   |         |          |            |          |
| Pb-free Bumped Semiconductor D |        | Nickel (external applications only)      | Nickel   | 7440-02-0  |           | 0.0001895       | g   | 5000    | 0.5      | 56         | 0.0056   |
| Pb-free Bumped Semiconductor D |        | Metals                                   | Silver, metal  | 7440-22-4  |           | 0.00011939      | g   | 3150    | 0.315    | 35         | 0.0035   |
| Pb-free Bumped Semiconductor D |        | Metals                                   | Tin, metal   | 7440-31-5  |           | 0.00329162      | g   | 86850   | 8.685    | 989        | 0.0989   |
| Pb-free Bumped Semiconductor D |        | Solvents, additives, and other materials | Other miscellaneous substances (less than 5%).   | -          |           | 0.0003411       | g   | 9000    | 0.9      | 102        | 0.0102   |
| Pb-free Bumped Semiconductor D |        | Glass                                    | Silicon, doped   | -          |           | 0.03395839      | g   | 896000  | 89.6     | 10205      | 1.0205   |

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