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1 Purpose & Scope

Qorvo is committed to reducing the impact of known toxic substances in our products and processes. This starts with reducing or eliminating chemicals and substances that have been identified as hazardous to air, water, soil or human health in our processes and products – from the starting materials through to assembly and shipping materials. The purpose of this document is to inform Qorvo suppliers about those substances that Qorvo bans or restricts from use in the products Qorvo purchases from its suppliers to manufacture Qorvo products.

This document applies to those suppliers whose chemicals, materials, and/or components are used to manufacture Qorvo products. These suppliers provide chemicals, materials, and or components to Qorvo Sub-Contract Assemblers (SCAs) or to Qorvo facilities, who then manufacture the Qorvo product. These requirements also apply to materials to be used in engineering trials.

These materials are used in the manufacturing processes in the following ways:

- They are platings, components, or assembly materials that become incorporated into Qorvo’s final product.
- They do not become incorporated into Qorvo’s final product, but they contact the Qorvo product during its manufacture (cleaners, degreasers, plating preparation baths like cleaners or etching baths, developers and strippers for photoresists, etc.)
- They are used in the manufacturing processes, but they do not become incorporated into the final product, and they do not contact the Qorvo product during its manufacture (manufacturing process chilling equipment, process tanks for cleaning plating flight bars, chemicals for cleaning process equipment such as solvents, etc.)

If a supplier has any question about whether their product fits these categories, please contact the Qorvo Product Compliance Team at QorvoGreen@Qorvo.com for advice.

2 Definitions & Acronyms

Please see LIS-000602 for definitions related to Product Compliance.

3 Roles & Responsibilities


| Role | Responsibilities |
|---|--|
| Qorvo Green Group (QGG) | <p>Monitor worldwide regulations and standards in order to determine the potential impact on Qorvo products</p> <p>Monitor Significant Customer requirements in order to determine the potential impact on Qorvo products</p> <p>Use the information gathered from Steps 1 and 2 above to maintain this specification.</p> <p>NOTE: All related Assembly Subcontractor and Supplier data shall be forwarded to the Qorvo Green Group at QorvoGreen@qorvo.com</p> |
| Qorvo Assembly Subcontractor (Sub-con) and Suppliers: | <p>Comply with sections 5 and 6 of this document.</p> <p>If the material composition of a component or material is changed, the supplier shall follow the process outlined in COR.103 Supplier Quality Manual, specifically section 6.7 Product and Process Changes.</p> <p>Provide a Statement of Compliance to the requirements as defined in section 5 and 6 of this document using the form in Appendix A.</p> |

4 References


| Reference | Title | Location |
|------------|--|------------|
| COR.103 | Supplier Quality Manual | Doc Center |
| LIS-000591 | Qorvo Banned and Restricted Substance List (MS Excel file) | Doc Center |
| LIS-000602 | Product Compliance Definitions | Doc Center |
| SPE-001202 | Qorvo 3rd Party Test Report Specification for Suppliers | Doc Center |

External References


| Name used in this spec | Official Name of Reference | Official Reference Number | Location |
|-----------------------------|--|-------------------------------|---|
| ACGIH | American Conference of Government Industrial Hygienists (ACGIH) | Threshold Limit Values (TLVs) | Purchase ACGIH docs here |
| AIHA | American Industrial Hygiene Association (AIHA). The AIHA historically developed and posted Workplace Environmental Exposure Levels (WEELs), with Time Weighted Average (TWA) Exposure levels. In 2013 the development of WEELs was transferred from AIHA to the Occupational Alliance for Risk Science (OARS) which is managed by Toxicology for Risk Assessment (TERA). | None | OARS-WEELs on TERA Website |
| Austria BGB 1990/194 | Regulation of the Federal Minister for Environment, Youth and Family of 12 February 1990 on restrictions on the first registration and on the identification containing formaldehyde substances, preparations and finished goods (Formaldehyde Regulation) | BGBI. No. 194/1990 | Austria BGB 1990/194 pdf In German Language |
| Brazil CRS 023/1996 | CONAMA RESOLUTION No. 023 of December 12, 1996 Establishes provisions for definitions and treatment to be given to hazardous waste in accordance with the standards adopted by the Basel Convention on the control of Transboundary Movements of Hazardous Wastes and their Deposit. | CRS 023/1996 | CRS 023/1996 See pages 651, 654 |
| Brazil CRS 313/2002 | CONAMA RESOLUTION 313, October 29, 2002 Establishes provisions for the National Inventory of Solid Industrial Wastes. | CRS 313/2002 | CRS 313/2002 See pages 675, 686 |
| Brazil CRS 316/2002 | CONAMA RESOLUTION 316, October 29, 2002 Establishes provisions, procedures and criteria for the operations of systems for thermic residual treatment. | CRS 316/2002 | CRS 316/2002 See page 690 |
| California 93120 | ATCM to Reduce Formaldehyde Emissions from Composite Wood Products | 17 CCR §93120 | California 93120 |
| California OSHA PELs | Title 8. California OSHA Chapter 4. Division of Industrial Safety | 8 CCR §5155 Table AC-1. | CA OSHA PELs |

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| | Subchapter 7. General Industrial Safety Orders Group 16. Control of Hazardous Substances Article 107. Dusts, Fumes, Mists, Vapors, and Gases §5155. Airborne Contaminants Table AC-1. Permissible Exposure Limits for Chemical Contaminants | | |
| California Perchlorates | AB 826, The Perchlorate Contamination Prevention Act | 22 CCA §67384 | California Perchlorates Regulations (CCRs) |
| California Prop 65 | Safe Drinking Water and Toxic Enforcement Act of 1986 | 27 CA ADC, Division 4, Chapter 1 | CA Prop 65 |
| California SB-20/50 | Electronic Waste Recycling Act of 2003 | SB 20, Sher, Chapter 526, Statutes of 200 | CA SB-20/50 |
| Canada SOR/2008-178 | Perfluorooctane Sulfonate and its Salts and Certain Other Compounds Regulations (SOR/2008-178) | SOR/2008-178 | SOR/2008-178 |
| Canada SOR/2014-254 | Products Containing Mercury Regulations (SOR/2014-254) | SOR/2014-254 | SOR/2014-254 |
| Canada SOR/2016-188 | Phthalates Regulations | SOR/2016-188 | SOR/2016-188 |
| Canadian Environmental Protection Act, 1999 | Canadian Environmental Protection Act, 1999 | None | CEPA 1999 |
| Canada Prohibition of Certain Toxic Substances Regulation | Prohibition of Certain Toxic Substances Regulations, 2012 | SOR/2012-285 | Canada Prohibition of Certain Toxic Substances |
| China GB 2.1-2007 | Occupational exposure limits for hazardous agents in the workplace. | GB 2.1-2007 | Official version may be found by searching the standard code here |
| China GB 18401-2010 | Chinese National Standards (GB 18401-2010) National General Safety Technical Code for Textile Products | GB 18401-2010 | Official version may be found by searching the standard code here |
| China GB 20400-2006 | The Limit of Harmful Matters in Leather and Fur: GB 20400-2006 | GB 20400-2006 | Official version may be found by searching the standard code here |
| China GB 24427-2009 | Chinese National Standards (GB 24427-2009): | GB 24427-2009 | Official version may be |

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| | alkaline and non-alkaline zinc manganese dioxide batteries mercury cadmium lead restriction requirements | | found by searching the standard code here |
| China GB 24428-2009 | GB 24428-2009 Limitation of mercury content for zinc silver oxide, zinc oxygen and zinc manganese dioxide button batteries | GB 24428-2009 | Official version may be found by searching the standard code here |
| China GB 33372-2020 | GB 33372-2020: Limit of volatile organic compounds content in adhesives | GB 33372-2020 | Official version may be found by searching the standard code here |
| China GB 30981-2020 | GB 30981-2020: Limit of harmful substances of industrial protective coatings | GB 30981-2020 | Official version may be found by searching the standard code here |
| China GB 38507-2020 | GB 38507-2020: Limits of volatile organic compounds (VOCs) in printing ink | GB 38507-2020 | Official version may be found by searching the standard code here |
| China RoHS 2 | Administrative Measures for the Restriction of Hazardous Substances in Electrical and Electronic Products | Order No. 32, 2016 | No known link to a publicly available document at this time |
| Denmark Statutory Order 289 | Order limiting the formaldehyde in particle board, plywood and similar panels used in furniture, fixtures and the like | Statutory Order no. 289 of 22 June 1983 Amended by: Order 616 1986 | Statutory Order 289 (Danish) |
| (EC) No 13/1999 | COUNCIL DIRECTIVE 1999/13/EC of 11 March 1999 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations | (EC) No 13/1999 | (EC) No 13/1999 |
| D.C. Law 21-108 | D.C. Law 21-108. Carcinogenic Flame Retardant Prohibition Amendment Act of 2016. | D.C. Law 21-108 | D.C. Law 21-108 |
| (EC) No 42/2004 | DIRECTIVE 2004/42/CE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in | (EC) No 42/2004 | (EC) No 42/2004 |


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| | certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC | | |
| (EC) No 850/2004 | REGULATION (EC) No 850/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC | (EC) No 850/2004 Amended by: (EU) No 757/2010 (EC) No 519/2012 (EU) No 1342/2014 | (EC) No 850/2004 (EU) No 757/2010 (EU) No 519/2012 (EU) No 1342/2014 |
| (EC) No 251/2009 | COMMISSION DECISION of 17 March 2009 requiring Member States to ensure that products containing the biocide dimethylfumarate are not placed or made available on the market | (EC) No 251/2009 Amended by: (EC) No 153/2010 Incorporated into EU REACH Annex XVII | (EC) No 251/2009 (EC) No 153/2010 EU REACH Annex XVII |
| (EC) No 552/2009 | COMMISSION REGULATION (EC) No 552/2009 of 22 June 2009 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as regards Annex XVII | (EC) No 552/2009 Incorporated into EU REACH Annex XVII | EU REACH Annex XVII |
| ECHA/NA/15/29 | ECHA News Announcement: SEAC concludes on Bisphenol A, DecaBDE and PFOA restrictions and finalises two opinions for authorisation | ECHA/NA/15/29 | ECHA/NA/15/29 Background Document (see pages 12-13 for proposed restrictions) |
| EEC/769/76 | Council Directive 76/769/EEC of 27 July 1976 on the approximation of the laws, regulations and administrative provisions of the Member States relating to restrictions on the marketing and use of certain dangerous substances and preparations | Directive 76/769/EEC | This Directive has been repealed and replaced by EU REACH |
| EEC/467/85 | Council Directive 85/467/EEC of 1 October 1985 amending for the sixth time (PCBs/PCTs) Directive 76/769/EEC on the approximation of the laws, regulations and administrative provisions of the Member States relating to restrictions on the marketing and use of certain dangerous substances | Directive EEC/467/85 | Directive EEC/467/85 This Directive has been repealed and replaced by the Stockholm Convention |


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| | and preparations | | |
| (EU) No 75/2010 | DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (Recast) | (EU) No 75/2010 | (EU) No 75/2010 |
| (EU) No 276/2010 | COMMISSION REGULATION (EU) No 276/2010 of 31 March 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as regards Annex XVII (dichloromethane, lamp oils and grill lighter fluids and organostannic compounds) | (EU) No 276/2010 Incorporated into EU REACH Annex XVII | EU REACH Annex XVII |
| (EU) No 1272/2013 | COMMISSION REGULATION (EU) No 1272/2013 of 6 December 2013 amending Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as regards polycyclic aromatic hydrocarbons | (EU) No 1272/2013 Incorporated into EU REACH Annex XVII | (EU) No 1272/2013 EU REACH Annex XVII |
| EU Battery | Batteries and Accumulators and Waste Batteries and Accumulators Directive | 2006/66/EC Amended by: 2008/12/EC 2008/103/EC 2013/56/EU | EU Battery |
| EU CLP | REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 | 2008/1272/EC Adapted to technical and scientific progress (ATP) 14 times to date. | EU CLP Legislation |
| EU Euroatom | Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection | EU D 96/29/Euroatom Amended by: | EU 96/29/Euroatom |

| Name used in this spec | Official Name of Reference | Official Reference Number | Location |
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| | of the health of workers and the general public against the dangers arising from ionizing radiation | 97/43/Euroatom 2003/122/Euroatom To be repealed and replaced by: 2013/59/Euroatom | EU 2013/59/Euroatom |
| EU GHG | Regulation (EU) No 517/2014 of the European Parliament and of the Council of 16 April 2014 on fluorinated greenhouse gases | (EU) No 517/2014 replacing (EC) No 842/2006 | EU GHG |
| EU Nanomaterials | COMMISSION RECOMMENDATION of 18 October 2011 on the definition of nanomaterial | 2011/696/EU | EU Nanomaterials |
| EU ODS | Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer | (EC) No 1005/2009 (recast of (EC) No 2037/2000) | EU ODS (EC) No 2037/2000 |
| EU Packaging | Packaging and Packaging Waste Directive | 94/62/EC Amended by: 2004/12/EC 2005/20/EC 2013/2/EU 2015/720/EU | EU Packaging |
| EU REACH | Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) | (EC) No 1907/2006 | EU REACH Annex XVII |
| EU RoHS | Restriction of Hazardous Substances in Electrical and Electronic Equipment Directive | 2011/65/EU Amended by: 2015/863/EU | EU RoHS 2 Follow the EU RoHS process here . |
| EU Toy Safety Directive | DIRECTIVE 2009/48/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 June 2009 on the safety of toys | 2009/48/EC | EU Toy Safety Directive |
| EU WEEE | Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE) | 2002/96/EC Amended by: 2003/108/EC 2008/34/EC | 2002/96/EC 2012/19/EU Follow the EU WEEE |


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| | | Repealed and recast by: 2012/19/EU | process here . |
| Formaldehydverordnung | See Austria: BGB 1990/194 | | |
| France ACT N.2012-1442 | ION 2012-1442 of 24 December 2012 in the suspension of the manufacture, import, export and marketing of any packaging specializing in food containing bisphenol A | ION 2012-1442 | France Act N. 2012-1442 |
| GADSL | Global Automotive Declarable Substance List (GADSL) | None | https://www.gadsl.org/ |
| France Decree no. 2012-232 | Decree no. 2012-232 of 17 February 2012 on the annual declaration on substances at nanoscale in application of article R. 523-4 of the Environment code | Decree no. 2012-232 | Decree no. 2012-232 |
| Germany: ChemVerbotsV | Regulation on bans and restrictions on the marketing of dangerous substances, preparations and articles under the Chemicals Act (banning certain chemicals - ChemVerbotsV) | ChemVerbotsV | ChemVerbotsV |
| Germany: Consumer Goods Ordinance | Bedarfsgegenständeverordnung | None | Germany: Consumer Goods Ordinance |
| Germany: GS Mark | Act On The Reorganisation Of The Safety Of Technical Work Equipment And Consumer Products of 6 January 2004 | Section 7. GS Mark | Germany: GS Mark |
| IEC 61249-2-21 | The International Electrochemical Commission's (IEC) Definition of Halogen-Free | IEC 61249-2-21 | IEC 61249-2-21 |
| IEC 62474 | Material Declaration for Products of and for the Electrotechnical Industry | IEC 62474 | IEC 62474 |
| IEEE 1680 | Standards for Environmental Assessment of Electronic Products | IEEE 1680 | IEEE 1680 |
| Indonesia ODS | Prohibition From Producing Ozone Depleting Substances And From Producing Materials That Use Ozone Depleting Substances | Regulation of the Minister of Industry of the Republic of Indonesia No. 33/M-IND/PER/4/2007 | Indonesia ODS |
| IPC 4101 | Specification for Base Materials for Rigid and | IPC-4101D-WAM1 | IPC-4101 |

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| | Multilayer Printed Boards | | |
| Japan Evaluation of Chemical Substances | Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. | Act No. 117 of October 16, 1973 | Japan Evaluation of Chemical Substances |
| Japan Industrial Safety and Health Act | Industrial Safety and Health Act | Act No. 57 of June 8, 1972 (Last amended by Act No. 25 of 2006. | Japan Industrial Safety and Health Act |
| Japan Nuclear Material | Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors | Act No. 166 of June 10, 1957 Amended by: Act No. 82 of November 22, 2013 | Japan Nuclear Material |
| Japan ODS | Law concerning the Protection of the Ozone Layer through the Control of Specified Substances and Other Measures | Law No. 53 of May 20, 1988 Amended by Law No. 8 of 1991, No. 89 of 1993, No. 54 of 1994 | Japan ODS |
| J-MOSS | The Marking for Presence of the Specific Chemical Substances for Electrical and Electronic Equipment | JIS C 0950 | J-MOSS |
| JS709 | Joint JEDEC/ECA Standard, Definition Of "Low-Halogen" For Electronic Products | JS709B | JS709B |
| Korea Electrical Appliances | Electrical Appliances Safety Control Act | Act No.9680, 21, May, 2009 | Korea Electrical Appliances And search for "Electrical Appliances Safety Control Act" |
| Korea Quality Control | Quality Control and Safety Management of Industrial Products Act | Act No.12314, 21, Jan, 2014 | Korea Quality Control And search for "Quality Control and Safety Management of Industrial Products Act" |
| Korea RoHS | Resource Recycling of Electrical and Electronic Equipment and Vehicles | Act No. 8405, 2007 | Korea RoHS |
| Kyoto Protocol | Kyoto Protocol To The United Nations Framework Convention On Climate Change | None | Kyoto Protocol See also: UNFCCC Website |
| Lithuania HN 96:2000 | Lithuania HN 96: 2000 "Children's Textile Articles. | HN 96:2000 | Lithuanian HN 96:2000 |


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| | Hygiene Norms and Regulations" | | In Lithuanian |
| Montreal Protocol | The Montreal Protocol on Substances that Deplete the Ozone Layer | None | Montreal Protocol |
| New York Battery Mgmt | 2012 New York Consolidated Laws ENV - Environmental Conservation 27-0719 - Battery management and disposal. | NY Env Cons L § 27-0719 (2012) | New York Battery Mgmt |
| NIOSH | The National Institute for Occupational Safety and Health (NIOSH) | NIOSH | Benzene Ethylbenzene n-Hexane Tetrachloroethylene Toluene Trichloroethylene m-Xylene o-Xylene p-Xylene |
| Norway Product Regulations | Regulations relating to restrictions on the manufacture, import, export, sale and use of chemicals and other products hazardous to health and the environment (Product Regulation) | FOR-2004-06-01-922 None | FOR-2004-06-01-922 Norwegian Environment Agency |
| OSPAR POPs | The List of Chemicals for Priority Action (POPs) | 2004-12 | OSPAR POPs |
| Responsible Minerals Initiative (RMI) | Responsible Minerals Initiative (formerly known as Conflict Free Sourcing Initiative (CFSI)) | none | RMI |
| Significant Customer Requirement | Qorvo has identified several "significant" customers who are also industry leaders in Product Compliance Management. These customers' requirements are incorporated into this document. Some of these customers' requirements go beyond regulatory requirements, which will explain the stricter nature of some of Qorvo's requirements. | Not applicable | Not applicable |
| Stockholm Convention | Stockholm Convention on Persistent Organic Pollutants | None | Stockholm Convention |
| Swiss ORRChem | Ordinance on the Reduction of Risks relating to the Use of Certain Particularly Dangerous Substances, Preparations and Articles | 814.81 | Swiss ORRChem |
| Taiwan Batteries | Restrictions on the Manufacture, Import, and Sale of Dry Batteries | None | No known link to a publicly available document at this |

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| | | | time. WTO TBT Notice can be see here . |
| Taiwan RoHS | Section 5 “Marking of presence” of CNS 15663 | CNS 15663 | Information regarding this requirement can be found on the EU Commission site for WTO TBT Notices here . |
| Turkey: Hazardous Chemical Content | Hazardous Chemical Content of Some Consumer Products | Number: 29 236 | Turkey: Hazardous Chemical Content |
| UL 110 | UL 110 Standard for Sustainability for Mobile Phones | UL 110 | UL 110 |
| US Batteries | Mercury-Containing and Rechargeable Battery Management Act | PUBLIC LAW 104-142 EPA Universal Waste Requirements (40 CFR 273) | Public Law 104-142 USEPA 40 CFR 273 |
| US CPSIA | Consumer Product Safety Improvement Act of 2008 | PUBLIC LAW 110–314 | US CPSIA |
| US Dept. Homeland Security | 6 USC Chapter 1, Subchapter XVI: Chemical Facility Anti-Terrorism Standards, Chemicals of Interest List | 6 USC Chapter 1, Subchapter XVI | US DHS Col |
| US Dodd-Frank | Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, Section 1502. Conflict Minerals | Public Law 111-203 | US Dodd-Frank |
| USEPA ODS | United States Clean Air Act | 40 CFR 601-618 | USEPA ODS |
| USEPA SCCPs SNUR | Significant New use Rule (SNUR); Benzidine-Based Dyes; Di-n-pentyl phthalate (DnPP); and Alkanes, C12-13, Chloro | Unified Agenda 2070-AJ73 | USEPA SCCPs SNUR |
| USEPA SNURs | SIGNIFICANT NEW USES OF CHEMICAL SUBSTANCES | 40 CFR 721 | USEPA SNURs |
| USEPA TRI | Emergency Planning and Community Right-to-Know Act (EPCRA), Section 313 Toxic Release Inventory | 40 CFR 372. | USEPA TRI |
| USEPA TSCA - Asbestos | United States Toxic Substances Control Act | 40 CFR 763 | USEPA TSCA - Asbestos |
| USEPA TSCA - Formaldehyde | Formaldehyde Standards for Composite Wood Products Act (Regulations are not implemented at this time) | US Public Law 111-199 Will be in 40 CFR 601 | Public Law 111-199 - Formaldehyde EPA Formaldehyde Emissions Page |

| Name used in this spec | Official Name of Reference | Official Reference Number | Location |
|---------------------------------|--|---|--|
| USEPA TSCA - PBTs | United States Toxic Substances Control Act | 40 CFR 751 | USEPA TSCA - PBTs |
| USEPA TSCA - PCBs | United States Toxic Substances Control Act | 40 CFR 761 | USEPA TSCA - PCBs |
| US Radiation | United States Nuclear Regulatory Commission Regulations, Title 10 Code of Federal Regulations | 40 CFR 20 | US Radiation |
| US SEC Conflict Minerals | § 240.13p-1 Requirement of Report Regarding Disclosure of registrant's supply chain information regarding conflict minerals. | 17 CFR 240 and 249b | US SEC Conflict Minerals |
| Vermont Act 85 | Vermont Statutes, Title 9, Chapter 80: Flame Retardants | Title 9, Chapter 80, § 2972 | Vermont Act 85 |
| Washington CHCC | Children's Safe Products Act | Children's Safe Products Chapter 70.240 RCW | Washington CHCC |

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5 Compliance Requirements

5.1 Change Management

If the material composition of a component or material is changed, the supplier shall follow the process outlined in COR.103 Supplier Quality Manual, section 6.7, Product and Process Changes. If the change requires a formal PCR (as defined in COR.103), the Supplier shall send Qorvo updated Material Declarations, updated Certificates of Compliance for RoHS, REACH, and Halogen-free; update any applicable 3rd party analytical testing per the requirements in Sections 5 and 6 of this document, and update the Conflict Mineral Reporting Template (CMRT).

5.2 Statement of Compliance

Provide a Statement of Compliance to the requirements as defined in this document (see Appendix 1 for the Statement of Conformance form). Compliance statement shall clearly show any exemptions being claimed to the EU RoHS directive (reference note below for additional requirements on exemptions being claimed). If Sub-con or supplier is not compliant to these requirements, the Sub-con or supplier shall clearly state any exceptions taken and Qorvo will take those under consideration. Qorvo may not accept your exception, but we will review our reasons with our suppliers.

Note for Suppliers and Subcons:


Qorvo assumes that all EU RoHS exemptions will eventually expire. When an exemption is within two years of expiring, the supplier shall notify Qorvo and either make available a replacement material/component that will not require an exemption (e.g., fully lead-free) or provide information to Qorvo on the necessity to extend the exemption period. This information shall contain details on technical evaluations, engineering data, the supplier's conclusion as to why extending the exemption is required and the application to the EU for requesting an extension to the directive.

5.3 Full Disclosure Material Declarations

5.3.1 Suppliers whose products will be used to manufacture Qorvo wafers

Full material disclosure (Material Declaration) is not required. Suppliers should provide accurate, detailed Safety Datasheets and ensure that all substances described in Table 1 below are disclosed.

5.3.2 Suppliers whose products will be used to assemble Qorvo products

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Suppliers must provide full material disclosure (Material Declaration) for any qualification builds and components supplied to Qorvo. For materials and chemical preparations, please provide Safety Data Sheets (SDSs) with detailed composition information. Please use engineering calculations and/or analytical testing (when required) to determine the substances present in the components and materials supplied to Qorvo. If there are “confidential”, “proprietary”, or “trade secret” ingredients in the components or materials, please ensure that these substances are not covered by the restrictions listed in Table 1. Qorvo must be informed of the presence of any substances listed in Table 1, due to regulatory and customer requirements.

5.4 3rd Party lab Test Reports

See SPE-001202 “Qorvo 3rd Party Test Report Specification for Suppliers” for these requirements.

5.5 Certificates of Compliance


Sub-cons and Suppliers must provide Qorvo with a Certificate of Compliance (CoC) to various global regulations, including the EU RoHS Directive and the EU REACH Regulation. The EU REACH Regulation includes the Candidate List of Substances of Very High Concern (SVHCs), which is updated twice per year. Qorvo will accept annual updates on the Certificates of Compliance. However, if a REACH SVHC is added that is included in components or materials purchased from the Supplier, please inform Qorvo immediately.

5.6 Process Materials

Please note that Table 1 contains various substances and substance categories which are banned or restricted from use in manufacturing processes. Please check to ensure you are not using these substances in the restricted uses as detailed in Table 1. If you are using these substances in a restricted use, please clearly state any exceptions taken and Qorvo will take those under consideration. Qorvo may not accept your exception, but we will review our reasons with our suppliers.

5.7 Packaging Materials

These requirements are focused on reels, carrier/cover tape, bags, boxes, labels, inks/dyes, foam, pallets, etc. Note that this requirement is only for Packaging Material Suppliers who supply Packaging Material to Qorvo to be used to ship Qorvo products to customers. It does not cover the Packaging Material used to ship material to Qorvo facilities for Qorvo’s use. Please note in Table 1 that various substances and substance categories are banned or restricted from use in Packaging Materials. Please check to ensure you are not using these substances in Packaging Materials as detailed in Table 1. If you are using these substances in a restricted use, please clearly state any exceptions taken and Qorvo will take those under consideration. Qorvo may not accept your exception, but we will review our reasons with our suppliers.

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Also note that Packaging Materials must contain less than a total of 80 ppm of lead, mercury, cadmium, and hexavalent chromium (not 100 ppm as listed in the EU Packaging Directive), due to customer restrictions. The cadmium content in Packaging Materials must be less than 5 ppm of this total.

5.8 Conflict Minerals

Sub-cons and suppliers must provide Qorvo with updated Responsible Minerals Initiative (RMI) Conflict Mineral Reporting Templates (CMRTs) twice per year. Qorvo will typically have mid-summer and end-of-year campaigns to solicit updated CMRTs from its supply chain. For these campaigns, Qorvo requests that Sub-cons and suppliers do a complete “refresh” of their data, by determining their current supply chain and requesting updated CMRTs from their supply chain, and requesting that their supply chain do the same. CMRTs should be in the latest version of the CMRT (which can be accessed at <http://www.responsiblemineralsinitiative.org/conflict-minerals-reporting-template/>)

Qorvo will review suppliers’ CMRTs and give feedback on the degree of completion of the CMRT, the status of any smelters that may not be compliant to the Responsible Minerals Assurance Process, and may request additional investigation or even the removal of certain smelters from the suppliers’ supply chains.


5.9 Documentation Control and Recordkeeping

All documentation regarding Product Compliance should be maintained within a document control system that allows traceability to the products and to the organizations that created the documents. Supplier should maintain all documentation supporting material declarations, certificates of compliance, and analytical reports for a minimum of 10 years. Supporting documentation should be checked for consistency between material declarations, MSDSs, and/or analytical reports. Discrepancies between any of this documentation should be resolved.


6 Banned and Restricted Substances List

Table 1 below lists all of the substances and substance categories that are banned or restricted in products or are restricted in manufacturing processes used to manufacture components or materials for Qorvo products. Table 1 lists:

- The substance or substance category that is restricted or banned. Please see LIS-000591 for a list of the chemical substances that are covered by Table 1.
- The materials for which the substance or substance category are banned or restricted
- The Limits (at the Homogeneous Material level) above which the substance or substance category is restricted or banned
- The legal or customer reference for why the substance or substance category is restricted or banned. Please see the “External References” table in Section 3 for more information on these requirements.

| | | |
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- Whether or not chemical analysis is required for proof of compliance to the Limits. See SPE-001202 "Qorvo 3rd Party Test Report Specification for Suppliers" for the requirements for analytical reports submitted to Qorvo.
- Comments – these may cover whether Qorvo accepts any RoHS Exemptions for the use of this material, or any other pertinent comments

| | | |
|---|--|---------------|
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**TABLE 1 - QORVO BANNED & RESTRICTED SUBSTANCES LIST
(SEE LIS-000591 FOR SUBSTANCES THAT MEET THESE CATEGORIES)**

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| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|---------------------------------|---|--|---|---|---|
| Aluminum Compounds | All Components and Materials | Report the presence of any Aluminum compounds | Significant Customer Requirement | No | |
| Antimony Compounds | All Components and Materials | Notify if intentionally used. Unintentional use limited to 0.070 % (700 ppm) | California Prop 65 EU REACH Significant Customer Requirement Washington CHCC | Yes | |
| | Chemical products sold to Qorvo | Report the presence of any antimony compounds | USEPA TRI | No | |
| Arsenic Compounds | Metals and Metal Alloys | No Intentional Use. Unintentional Use limited to 0.1 % (1000 ppm) | California Prop 65 EU REACH Significant Customer Requirement Washington CHCC | No | |
| | Semiconductor substrates and dopants | Exempt | | No | |
| | All other components and materials | No Intentional Use. Unintentional Use limited to 0.005 % (50 ppm) | | Yes if material is glass | |
| | Chemical products sold to Qorvo | Report the presence of any arsenic compounds | USEPA TRI | No | |
| Asbestos Compounds | All Components and Materials | No Intentional Use. Unintentional Use limited to Not detectable | EU REACH Germany: ChemVerbotsV Japan Industrial Safety and Health Act Swiss ORRChem USEPA TSCA - Asbestos | No | |
| Azo Colorants and azodyes | Textiles, Garments, Leathers, Plastics that have significant exposure to skin | No intentional use. 30 ppm total content if present as impurity | China GB 18401-2010 China GB 20400-2006 EU REACH Germany: Consumer Goods Ordinance | No | Qorvo does not know of any components or materials that it purchases that have significant exposure to skin |
| Barium Compounds | Chemical products sold to Qorvo | Report the presence of any barium compounds | USEPA TRI | No | |

| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|--|--|--|--|--|---|
| Benzenamine, N-Phenyl-, Reaction Products with styrene and 2,4,4-trimethylpentene (BNST) CAS No. 68921-45-9 | All Components and Materials | No intentional Use | Canadian Environmental Protection Act, 1999 Canada Prohibition of Certain Toxic Substances Regulation Significant Customer Requirement | No | |
| Benzene CAS No. 71-43-2 | All Components and Materials | 0.1 % (1000 ppm) | Significant Customer Policy | No | |
| | Use in Manufacturing process | Prohibited from use in manufacturing process | ACGIH China GB 2.1-2007 NIOSH Significant Customer Policy | Yes if used in manufacturing process. | In cases where a variance from this requirement is requested by manufacturing operations associated with the manufacture of Qorvo products, the supplier must show by 3 rd party testing that the breathing zone in the process are < 0.32 mg/m ³ (0.1 ppm) |
| | Use as cleaning agents, degreasers, demolder solutions in all manufacturing processes (the substance contacts the product) | Prohibited from use (content of any cleaning agents, degreasers, and demolder solutions must be < 100 ppm) | Significant Customer Policy | Yes, if contained in any cleaning agents, degreasers, demolder solutions | The supplier must show by 3rd party testing that the breathing zone in the process are < 0.32 mg/m ³ (0.1 ppm) |
| Benzidine-Based Dyes | All Components and Materials | No Intentional Use. Unintentional Use limited to Not detectable | USEPA SNURs Significant Customer Policy | No | |
| Beryllium Compounds | All Components and Materials | No intentional use Unintentional Use limited to 0.10 % (1000 ppm) | EU WEEE Significant Customer Requirement | Yes | |

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| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|--|---|--|---|---|--|
| | Use in any manufacturing process | The breathing zones where beryllium is used must be tested and found to be < 0.002 mg/m ³ | California OSHA PELs China GB 2.1-2007 | Yes, Air quality monitoring required if used in manufacturing process | |
| | Chemical products sold to Qorvo | Report the presence of any beryllium compounds | USEPA TRI | No | |
| Biocidal Substances | All Materials | Reporting is required if there are detectable levels | EU No 528/2012 (BPR) | No | |
| Bismuth Compounds | All Materials | Report the presence of any bismuth compounds | Significant Customer Requirement | No | |
| Bisphenol A CAS No. 80-05-7 | All Components and Materials made from Bisphenol A as a monomer | No detectable levels in component or materials | France Act N.2012-1442 Significant Customer Requirement Washington CHCC | No | The presence of any detectable levels of Bisphenol A is required to be reported. |
| | Thermal Paper | Non-use | Significant Customer Requirement | | |
| Bisphenol Chemicals (Various) | All Materials | Reporting is required if the substance exceeds 0.01 % (100 ppm) | Significant Customer Requirement | No | |
| Bisphenol F CAS No. 620-92-8 | All Materials | Reporting is required if the substance exceeds 0.01 % (100 ppm) | Significant Customer Requirement | No | |
| Bisphenol S CAS No. 2467-02-9; 1333-16-0; 80-09-1 | All Materials | Reporting is required if the substance exceeds 0.01 % (100 ppm) | Significant Customer Requirement | No | |
| Brominated Flame Retardants | All Materials | No intentional use | Significant Customer Requirement | No | |
| Brominated Organic Solvents | All Materials | Report the presence of any Brominated Organic Solvents | Significant Customer Requirement | No | |
| | Use as cleaning agents, degreasers, demolder solutions in all manufacturing processes | Prohibited from use | | | |
| | All other manufacturing processes | No intentional use | | | |

| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|--------------------------------------|---|--|---|---|--|
| 2-Butoxy ethanol CAS No. 111-76-2 | Use as cleaning agents, degreasers, demolder solutions in all manufacturing processes | Prohibited from use | Significant Customer Requirement | No | |
| | All other manufacturing processes | No intentional use | | | |
| Cadmium Compounds | Batteries | 0.0002 % (2 ppm) | China GB 24427-2009 China GB24428-2009 EU Battery Korea Quality Control Significant Customer Requirement Swiss ORRCHEM | Yes | Qorvo does not permit any exemptions for Cadmium for RoHS Compliance. |
| | Packaging | 80 ppm total of Cd + Cr(VI) + Hg + Pb | EU Packaging Significant Customer Requirement | Yes, if shipped to a customer | |
| | Solders | 20 ppm | Significant Customer Requirement | Yes | |
| | All Other Components and Materials – Organic including Packaging | 0.0005 % (5 ppm) | California SB-20/50 California Prop 65 China RoHS 2 | Yes | |
| | All Other Components and Materials - Inorganic | 0.005 % (50 ppm) | EU REACH EU RoHS J-MOSS Korea Quality Control Korea RoHS OSPAR POPs Significant Customer Requirement Washington CHCC | Yes | |
| | Chemical products sold to Qorvo | Report the presence of any cadmium compounds | USEPA TRI | No | |
| California Prop 65 | All Components and Materials | No limits (unless listed specifically elsewhere in this table). However, the presence and amounts of any California Prop 65 substances must be reported. | California Prop 65 Significant Customer Requirement | No | The presence of California Prop 65 substances can be reported either via a Safety Data Sheet or a Full Material Declaration. |
| Certain Glycol Ethers | Chemical products sold to Qorvo | Report the presence of any glycol ether compounds | USEPA TRI | No | |

| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|---|---|---|--|---|---|
| CFATs-DHS Chemicals of Interest Compounds | Chemical products sold to Qorvo | Report the presence of any CFATs-DHS compounds | US Dept. Homeland Security | No | |
| CFC, HFC, PFCs, SF6 (also known as Fluorinated Greenhouse Gas Substances) | All Components and Materials | No Intentional Use | EU GHG Kyoto Protocol Montreal Protocol Significant Customer Requirement Swiss ORRChem | No | These substances cannot contact the product during the manufacturing process. |
| | Manufacturing Processes | Restricted from use | | | |
| Chlorinated Organic Solvents | All Components and Materials | 0.1 % (1000 ppm) total content and Cl < 900 ppm | Significant Customer Requirement | Yes if used in cleaning agents, degreasers, and demolder solutions in all manufacturing processes. Use Solvent extraction, analyzed by GC-MS or HPLC-MS; or EN 14582 for total chlorine | |
| | Use as cleaning agents, degreasers, demolder solutions in all manufacturing processes | Prohibited from use | | | |
| | All other manufacturing processes | No intentional use | | | |
| Chlorinated Benzene Compounds | Use as a solvent in paints, coatings, inks, adhesives, primers | If > 0.1 % (1000 ppm) in material, the use must be reported to Qorvo. | Significant Customer Requirement | No | |
| | Use as cleaning agents, degreasers, demolder solutions in all manufacturing processes | ≤ 0.1 % (1000 ppm) and ≤ 900 ppm total Chlorine | | | |
| Chlorofluorocarbons and Halons (Class I and II Ozone Depleting Chemicals) | All components and materials Packaging | No use | EU ODS Indonesia ODS Japan ODS Montreal Protocol USEPA ODS Significant Customer Requirement | No | |
| | Use in any manufacturing processes | | | | |
| Chlorophenols | Chemical products sold to Qorvo | Report the presence of any chlorophenol compounds | USEPA TRI | No | |

| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|---|--|--|---|---|---|
| Chromium Compounds, including Hexavalent Chromium Compounds | Chemical products sold to Qorvo | Report the presence of any chromium compounds | USEPA TRI | No | |
| Chromium (Hexavalent) Compounds | Packaging | 80 ppm total of Cd + Cr(VI) + Hg + Pb | EU Packaging Significant Customer Requirement | Yes, if shipped to a customer | Qorvo does not permit any exemptions for Chromium, hexavalent (Cr ⁶⁺) for RoHS Compliance. |
| | Surface Coatings (platings, conversion coatings, etc.) | No detectable residue on the surface | California Prop 65 California SB-20/50 China RoHS 2 | Yes | |
| | All Other Components and Materials – Organic and Inorganic | No intentional use Unintentional Use limited to 0.050 % (500 ppm) | EU REACH EU RoHS J-MOSS Korea Quality Control Korea RoHS OSPAR POPs Significant Customer Requirement Taiwan RoHS | Yes | |
| Cobalt Compounds (excluding Cobalt Dichloride) | Any materials that have significant exposure to skin | Prohibited from Use. | Significant Customer Requirement Washington CHCC | No | Qorvo does not know of any components or materials that it purchases that have significant exposure to skin |
| | All other materials | Report the presence of any cobalt compounds | Significant Customer Requirement | For any presence of cobalt, all sources must be traced to the smelters processing these metals and reported to Qorvo using the RMI Cobalt Reporting Template (CRT). | |
| | Chemical products sold to Qorvo | Report the presence of any cobalt compounds | USEPA TRI | No | |
| Cobalt Dichloride CAS No. 7646-79-9 | Moisture or humidity indicator products | No Intentional Use. Unintentional Use limited to 0.10 % (1000 ppm). | EU REACH Significant Customer Requirement | No | |

| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|--|---|---|--|---|---|
| Conflict Minerals (tin, tantalum, tungsten, and gold and their compounds) | All Components and Materials | Only Conflict Free sources of these metals may be used in Qorvo Products. | Responsible Minerals Initiative (RMI) Significant Customer Requirement US Dodd-Frank US SEC Conflict Minerals | | For any presence of tin, tantalum, tungsten, and gold (aka 3TG), all sources must be traced to the smelters processing these metals and reported to Qorvo using the RMI Conflict Mineral Reporting Template (CMRT). All smelters must be compliant to the Conflict Free Sourcing Program (RMI). |
| Copper Compounds | All Components and Materials | Report the presence of any copper compounds | Significant Customer Policy | No | |
| | Chemical products sold to Qorvo | | USEPA TRI | | |
| Cresol Compounds (also known as Methyl-Phenol Compounds) CAS No Name 108-39-4 <i>m</i> -Cresol 95-48-7 <i>o</i> -Cresol 106-44-5 <i>p</i> -Cresol 1319-77-3 Cresol (mixed) | All Components and Materials | ≤0.001% (10 ppm) | Canadian Environmental Protection Act, 1999 Significant Customer Requirement | No | |
| Cyanide Compounds | Chemical products sold to Qorvo | Report the presence of any cyanide compounds | USEPA TRI | No | |
| Cyclohexanone CAS No. 108-94-1 | Use as cleaning agents, degreasers, demolder solutions in all manufacturing processes | Prohibited from use | Significant Customer Policy | No | |
| | Use in Manufacturing process | No intentional use | | | |
| Decabromodiphenylethane (DBDPE) CAS No. 84852-53-9 | All Components and Materials | No Intentional Use. Unintentional Use limited to Not detectable | Significant Customer Policy | No | |
| (DBHP)BT OR UV-320 OR Phenol, 2-(2H-Benzotriazol-2-Yl)-4,6-Bis(1,1-Dimethylethyl)- CAS No. 3846-71-7 | All Components and Materials | No Intentional Use. Unintentional Use limited to 0.0005 % (5 ppm). | EU REACH Japan Evaluation of Chemical Substances Significant Customer Requirement | No | |

| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|---|---|---|--|---|----------|
| "DechloranePlus"™ CAS No. 13560-89-9 | All Components and Materials | No Intentional Use | Significant Customer Policy | No | |
| Diarsenic Pentoxide – CAS Number 1303-28-2 Diarsenic Trioxide – CAS Number 1327-53-3 | All Components and Materials | < 0.1% (1000 ppm) at the article level | EU REACH Significant Customer Requirement | No | |
| Di-isocyanate Compounds | Chemical products sold to Qorvo | Report the presence of any di-isocyanate compounds | USEPA TRI | No | |
| n,n-Dimethylformamide (DMF) CAS No. 68-12-2 | All Components and Materials | No Intentional Use | Significant Customer Policy | No | |
| | Use in Manufacturing process | Prohibited from use in manufacturing process | | | |
| Dimethylfumarate CAS No. 624-49-7 | All Components and Materials | ≤0.00001% (0.1 ppm) | (EC) No 251/2009 EU REACH | No | |
| Dioxin and Dioxin-like Compounds | Chemical products sold to Qorvo | Report the presence of any Dioxin and Dioxin-like compounds | USEPA TRI | No | |
| Endocrine Disrupting Chemicals (EDCs) | All Components and Materials | < 0.1% (1000 ppm) at the article level Report the presence of any Endocrine Disrupting Chemicals | Significant Customer Policy | No | |
| Ethanolamine CAS No. 141-43-5 | Use as cleaning agents, degreasers, demolder solutions in all manufacturing processes | Prohibited from use | Significant Customer Policy | No | |
| | Use in Manufacturing process | No intentional use | | | |
| 2-Ethoxyethanol CAS No. 110-80-5 | Use as cleaning agents, degreasers, demolder solutions in all manufacturing processes | Prohibited from use | Significant Customer Policy | No | |
| | Use in Manufacturing process | No intentional use | | | |

| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|--|---|---|--|---|---|
| 2-Ethoxyethyl acetate CAS No. 111-15-9 | Use as cleaning agents, degreasers, demolder solutions in all manufacturing processes | Prohibited from use | Significant Customer Policy | No | |
| | Use in Manufacturing process | No intentional use | | | |
| Ethylbenzene CAS No. 100-41-4 | All Components and Materials | Reporting is required if the substance exceeds 0.1 % (1000 ppm) | EU REACH Significant Customer Policy | No | In cases where a variance from this requirement is requested by manufacturing operations associated with the manufacture of Qorvo products, the supplier must show by 3 rd party testing that the breathing zone in the process are < 0.32 mg/m ³ (0.1 ppm) |
| | Use in Manufacturing process | Prohibited from use in manufacturing process | ACGIH China GB 2.1-2007 NIOSH Significant Customer Policy | Yes, Air quality monitoring required if used in manufacturing process | |
| N-Ethyl-2-pyrrolidone CAS No. 2687-91-4 | All Components and Materials | Report the presence of any N-Ethyl-2- pyrrolidone over 1000 ppm | Significant Customer Requirement | No | |
| Ethylenebisdithiocarbamic acid, salts and esters Compounds | Chemical products sold to Qorvo | Report the presence of any Ethylenebisdithiocarbamic acid, salts and esters compounds | USEPA TRI | No | |
| Flame Retardants | All Components and Materials | Report the presence of all Flame Retardant substances | Significant Customer Requirement | No | |

| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|--|------------------------------------|---|--|---|---|
| Fluorinated Greenhouse Gases (F-GHGs) | Use in Manufacturing process | No Threshold | Significant Customer Requirement | No | Suppliers are strongly advised to take steps to reduce emissions of F-GHGs. |
| Formaldehyde CAS No. 50-00-0 | Wood, Fiber, and Textile products | ≤0.00001% (0.1 ppm) | Austria BGB 1990/194 California 93120 China GB 18401-2010 China GB 20400-2006 Denmark Statutory Order 289 Germany: ChemVerbotsV Lithuania HN 96:2000 | No | |
| | All other components and materials | No Intentional Use. Unintentional Use limited to 0.010 % (100 ppm). | | | |
| GADSL Substances | All Components and Materials | Report the presence of any GADSL declarable Substances | Significant Customer Requirement | No | |
| Gallium Compounds | All Components and Materials | Report the presence of any Gallium compounds | Significant Customer Requirement | No | |
| Gold Compounds | All Components and Materials | Report the presence of any Gold compounds | Conflict Free Sourcing Initiative (CFSI) Significant Customer Requirement US Dodd-Frank US SEC Conflict Minerals | No | |
| Halogenated Diphenyl Methanes: CAS No Name 76253-60-6 Ugilec 141 81161-70-8 Ugilec 121 99688-47-8 DBBT | All Components and Materials | No Intentional Use. Unintentional Use limited to Not detectable | EU REACH Significant Customer Requirement | No | |
| Halogens (Bromine and Chlorine) | All Components and Materials | ≤ 900 ppm Br, ≤ 900 ppm Cl, ≤ 1500 ppm Br+Cl | IEC 61249-2-21 IPC 4101 JS709 Significant Customer Requirement | Yes | |
| Hexabromocyclodo-Decanes (HBCDDs) | All Components and Materials | No Intentional Use. Unintentional Use limited to 0.0075 % (75 ppm), | EU REACH Japan Evaluation of Chemical Substances Norway Product Regulations Significant Customer Requirement Swiss ORRChem | No | |

| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|--|---------------------------------|---|---|---|---|
| | Packaging | No Intentional Use. Unintentional Use limited to 80 ppm | Significant Customer Requirement | No | |
| Hexachlorobenzene CAS No. 118-74-1 | All Components and Materials | No Intentional Use. Unintentional Use limited to 0.001 % (10 ppm), | Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021 Significant Customer Requirement | No | |
| n-Hexane CAS No. 110-54-3 | All Components and Materials | 0.1 % (1000 ppm) | Significant Customer Policy | No | In cases where a variance from this requirement is requested by manufacturing operations associated with the manufacture of Qorvo products, the supplier must show by 3 rd party testing that the breathing zone in the process are < 100 mg/m ³ (28 ppm) |
| | Use in Manufacturing process | Prohibited from use in manufacturing process | ACGIH China GB 2.1-2007 NIOSH Significant Customer Policy | Yes, Air quality monitoring required if used in manufacturing process | |
| Hydrogen Fluoride CAS No. 7664-39-3 | Chemical products sold to Qorvo | Report the presence of any Hydrogen Fluoride | Significant Customer Requirement | No | |
| IEC 62474 Substances | All Components and Materials | Report the presence of any IEC 62474 declarable Substances | Significant Customer Requirement | No | |
| Indium Phosphide | All Components and Materials | Report the use of any Indium Phosphide | Significant Customer Requirement | No | |
| Isocyanate Compounds | All Components and Materials | If any of these compounds are used, please investigate suitable alternatives. Report any usages of these compounds. | Significant Customer Requirement | No | |

| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|---------------------------------|--|--|---|---|--|
| Lead and its Compounds | Batteries | 0.0040 % (40 ppm) | China GB 24427-2009 China GB24428-2009 EU Battery | Yes | Qorvo allows the use of the following EU RoHS Exemptions 6(a), 6(b), 6(c), 7(c)-I, 7(c)-II, and 7(c)-IV. |
| | Cables and Cords – surface coating material | 0.03 % (300 ppm) | California Prop 65 US CPSIA | Yes | |
| | Children's Products (other than Paint and Surface Coatings – see below) | 0.01 % (100 ppm) | US CPSIA | Yes | |
| | Packaging | 80 ppm total of Cd + Cr(VI) + Hg + Pb | EU Packaging Significant Customer Requirement | Yes, if shipped to a customer | |
| | Paint and Surface Coatings (including plastics; inks; surface coatings; and displays including housing, wiring, and printed circuit boards). | 0.005 % (50 ppm) | IEEE 1680 US CPSIA Significant Customer Requirement | Yes | |
| | All Other Components and Materials - Organic | 0.010 % (100 ppm) | California SB-20/50 China RoHS 2 | Yes | |
| | All Other Components and Materials - Inorganic | 0.080 % (800 ppm) | EU REACH EU RoHS J-MOSS Korea Electrical Appliances Korea Quality Control Korea RoHS OSPAR POPs Significant Customer Requirement US CPSIA | Yes | |
| | Chemical products sold to Qorvo | Report the presence of any lead compounds | USEPA TRI | No | |
| Lithium Compounds | All Components and Materials | Report the presence of any lithium compounds | Significant Customer Requirement | No | |
| Magnesium Compounds | All Components and Materials | Report the presence of any magnesium compounds | Significant Customer Requirement | No | |
| Manganese Compounds | Chemical products sold to Qorvo | Report the presence of any manganese compounds | USEPA TRI | No | |

| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|---|------------------------------|--|----------------------------------|---|----------|
| MCCPs (Medium Chain Chlorinated Paraffins) with the molecular formula: $C_xH_{(2x-y+2)}Cl_y$, where x = 14-17 and y = 6 to >24 | All Components and Materials | No intentional use. Unintentional Use limited to < 0.1 % (1000 ppm) and < 900 ppm Cl | Significant Customer Requirement | No | |

| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|--|---|---|---|--|--|
| Melamine CAS No. 108-78-1 | All Components and Materials | Report the presence of any Melamine over 1000 ppm | Significant Customer Requirement | No | |
| Mercury and its Compounds | Batteries | 0.0001 % (1 ppm) | Canada SOR/2014-254 China GB 24427-2009 China GB24428-2009 EU Battery New York Battery Management Taiwan Batteries US Batteries | Yes | Qorvo does not permit any exemptions for RoHS Compliance. |
| | Packaging | 80 ppm total of Cd + Cr(VI) + Hg + Pb | EU Packaging Significant Customer Requirement | Yes | |
| | All Other Components and Materials – Organic and Inorganic | No intentional use Unintentional Use limited to 0.010 % (100 ppm) | California SB-20/50 China RoHS 2 EU REACH EU RoHS J-MOSS Korea Electrical Appliances Korea Quality Control Korea RoHS OSPAR POPs Significant Customer Requirement US CPSIA Washington CHCC | Yes | |
| | Chemical products sold to Qorvo | Report the presence of any mercury compounds | USEPA TRI | No | |
| Methanol CAS No. 67-56-1 | Use as cleaning agents, degreasers, demolder solutions in all manufacturing processes | No intentional use | Significant Customer Requirement | No | |
| | All materials | Report detectable levels of Methanol | | | |
| n-Methyl Pyrrolidone (NMP) CAS No. 872-50-4 | Use as cleaning agents, degreasers, demolder solutions | Prohibited from use | AIHA California OSHA PELs Significant Customer Requirement | Yes, if contained in any cleaning agents, degreasers, demolder solutions | The supplier must show by 3rd party testing that the breathing zone in the process are < 40 mg/m ³ (10 ppm) |
| | All Components and Materials | 0.1 % (1000 ppm) | | | |

| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|---|--|---|---|---|---|
| Mica | All Components and Materials | Report the presence of any Mica | Significant Customer Requirement | No | |
| Mineral Oil Aromatic Hydrocarbons | Packaging | 1% (10000 ppm) in Printing Ink in Papers | France Circular Economy Law Significant Customer Requirement | No | |
| Nanomaterials | All Components and Materials | Report any usage of nanomaterials | France Decree no. 2012-232 Significant Customer Requirement | No | |
| Neodymium Compounds | All Components and Materials | No Intentional Use | EU Ecodesign Significant Customer Requirement | No | |
| Nickel Compounds | Any materials that have significant exposure to skin | ≤ 0.28 µg/cm ² /week leach rate using ICP/OES And Method: EN 1811:2011+AC:2012 (3samples) | California Prop 65 EU REACH | Yes if a component or material is expected to contact skin for a prolonged time period. | Qorvo does not know of any components or materials that it purchases that have significant exposure to skin |
| | All Components and Materials | Report the presence of any nickel compounds | Significant Customer Requirement | No | |
| | Chemical products sold to Qorvo | Report the presence of any nickel compounds | USEPA TRI | No | |
| Nicotine and Nicotine Salt Compounds | Chemical products sold to Qorvo | Report the presence of any nicotine or nicotine salt compounds | USEPA TRI | No | |
| NMP | See n-Methyl Pyrrolidone (NMP) CAS No. 872-50-4 | | | | |
| Nonylphenols and Nonylphenol ethoxylate Compounds | Any materials that have significant exposure to skin | No intentional use. | EU REACH Turkey: Hazardous Chemical Content | No | Qorvo does not know of any components or materials that it purchases that have significant exposure to skin |
| | Chemical products sold to Qorvo | Report the presence of any Nonylphenols and Nonylphenol ethoxylate compounds | USEPA TRI | No | |
| Octylphenol and its ether | All Components and Materials | 0.1 % (1000 ppm) | Significant Customer Requirement | No | |

| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|---|--|--|---|---|---|
| Organotin Compounds | All Components and Materials | No intentional use Unintentional Use limited to 0.10 % (1000 ppm) | EU REACH Japan Evaluation of Chemical Substances Norway Product Regulations Significant Customer Requirement | No | Metal tin, tin alloys, tin plating and tin inorganic compounds do not fall under this category. |
| PAHs – Polyaromatic Hydrocarbons | All Components and Materials | < 0.00005 % (0.5 ppm) | EU REACH Germany GS Mark Significant Customer Requirement Stockholm Convention | No | |
| | Chemical products sold to Qorvo | Report the presence of any PAH compounds | USEPA TRI | No | |
| Palladium Compounds | All Components and Materials | Report the presence of any Palladium compounds | Significant Customer Requirement | No | |
| Pentabromophenyl methyl acrylate CAS No. 59447-55-1 | All Components and Materials | 0.1 % (1000 ppm) | Significant Customer Requirement | No | |
| Pentachlorothiophenol (PCTP) CAS No. 133-49-3 | All Components and Materials | No Intentional Use | Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021 Significant Customer Requirement | No | |
| Phenol, isopropylated phosphate (3:1) (PIP (3:1)) CAS No. 68937-41-7 | All Components and Materials | No intentional use | USEPA TSCA - PBTs Significant Customer Requirement | No | |
| Plasticizers | All Components and Materials | Report the presence of any Plasticizer substances | Significant Customer Requirement | No | |
| Polybrominated Biphenyls (PBBs) | All Components and Materials - Organic | No intentional use Unintentional Use limited to 0.080 % (800 ppm) and ≤ 900 ppm Br. | California Prop 65 California SB-20/50 China RoHS 2 EU REACH EU RoHS J-MOSS | Yes | Qorvo does not permit any exemptions for PBBs for RoHS Compliance. |
| | All Components and Materials - Inorganic | No intentional use Unintentional Use limited to 0.080 % (800 ppm) and ≤ 900 ppm Br. | Korea Quality Control Korea RoHS OSPAR POPs Significant Customer Requirement Taiwan RoHS | Yes | |
| | Chemical products sold to Qorvo | Report the presence of any PBB compounds | USEPA TRI | No | |

| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|--|------------------------------------|---|--|---|---|
| Polybrominated Diphenyl Ethers (PBDEs) | All Components and Materials | No intentional use Unintentional Use limited to 10 ppm individually and 500 ppm for sum of total PBDEs | California SB-20/50 China RoHS 2 EU REACH EU RoHS J-MOSS Korea Quality Control Korea RoHS OSPAR POPs Significant Customer Requirement Taiwan RoHS | Yes | Qorvo does not permit any exemptions for PBDEs for RoHS Compliance. |
| PCBs - Polychlorinated biphenyls and specific substitutes | All Components and Materials | No intentional use. Unintentional Use limited to < 0.1 ppm | Brazil CRS 023/1996 Brazil CRS 313/2002 Brazil CRS 316/2002 California Prop 65 Japan Evaluation of Chemical Substances Stockholm Convention Significant Customer Requirement | No | |
| PCNs - Polychlorinated naphthalenes (more than 3 chlorine atoms) | All Components and Materials | No intentional use. Unintentional Use limited to < 5 ppm | Japan Evaluation of Chemical Substances Stockholm Convention Significant Customer Requirement | No | |
| Pentachlorophenol and its salts and esters | All Components and Materials | No intentional use. Unintentional Use limited to < 5 ppm | EU REACH Norway Product Regulations Significant Customer Requirement Stockholm Convention UL 110 | No | |
| PCTs - Polychloroterphenyls and derivatives | All Components and Materials | No intentional use. Unintentional Use limited to < 5 ppm | EU REACH Japan Evaluation of Chemical Substances Significant Customer Requirement Stockholm Convention | No | |
| Perchlorate Compounds | Batteries | 0.0000006 % (6 ppb) | California Perchlorates Significant Customer Requirement | No | |
| | All other Components and Materials | 0.0000006 % (6 ppb) | | | |

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| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|--|------------------------------|---|--|---|----------|
| Per- and Polyfluoroalkyl Substances (PFAS) | All Components and Materials | No intentional use Reporting is required if the substance exceeds 25 ppb for non-polymeric PFAS; 50 ppm for polymeric PFAS | Significant Customer Requirement | No | |
| PFBS and related substances | All Components and Materials | ≤ 0.1% by weight (1000 ppm) | Significant Customer Requirement | No | |
| PFCAs (C9-C14), their salts and related substances | All Components and Materials | No intentional use. Unintentional use limited to 25 ppb for the sum of C9-C14 PFCAs and their salts 260 ppb for the sum of C9-C14 PFCA-related substances | Significant Customer Requirement | No | |
| PFHxA, its salts and related substances | All Components and Materials | No intentional use. Unintentional use limited to 25 ppb for the sum of PFHxA and its salts 1000 ppb for the sum of PFHxA related substances. | Significant Customer Requirement | No | |
| PFHxS, its salts and related substances | All Components and Materials | No intentional use. Unintentional use limited to 25 ppb for the sum of PFHxS and its salts 1000 ppb for the sum of PFHxS related substances | Significant Customer Requirement | No | |
| PFOA Compounds | All Components and Materials | No intentional use. Unintentional Use limited to < 25 ppb | EU REACH Norway Product Regulations Significant Customer Requirement | Yes | |
| PFOS Compounds | All Components and Materials | ≤ 0.001% by weight (10 ppm) | | Yes | |

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| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|--|------------------------------------|--|---|---|----------|
| | Use in any manufacturing processes | No intentional use. Unintentional Use limited to < 10 ppm in any chemical products or mixtures | Canada SOR/2008-178 ECHA/NA/15/29 EU REACH Japan Evaluation of Chemical Substances Norway Product Regulations Significant Customer Requirement Stockholm Convention | | |
| Phthalates | All Components and Materials | No intentional use. Unintentional Use limited to < 0.08 % (800 ppm) | California Prop 65 Canada SOR/2016-188 Significant Customer Requirement EU REACH EU RoHS US CPSIA | Yes | |
| | Packaging | < 0.1 % (1000 ppm) | EU REACH | No | |
| Phthalic Anhydride CAS No. 85-44-9 | All Components and Materials | Report the presence of any Phthalic Anhydride | Significant Customer Requirement | No | |
| PVC | All Components and Materials | No intentional use. Unintentional Use limited to < 0.1 % (1000 ppm) and < 900 ppm Cl | Significant Customer Requirement | No | |
| Radioactive Substances | All Components and Materials | No intentional use. Unintentional Use limited to non-detectable levels of ionized radiation | California Prop 65 EU Euratom Japan Nuclear Material Significant Customer Requirement US Radiation | No | |
| Rare Earth Elements (REEs) | All Components and Materials | Report the presence of any REE compounds | Significant Customer Requirement | No | |
| REACH (EU) Annex XIV Substances | All Components and Materials | No intentional use. | EU REACH Significant Customer Requirement | No | |
| REACH (EU) Annex XVII Substances | All Components and Materials | Meet all restrictions in Annex XVII | EU REACH Significant Customer Requirement | No | |
| REACH (EU) Substances of Very High Concern (SVHCs) | All Components and Materials | ≤ 0.1 % (1000 ppm) | EU REACH Significant Customer Requirement | No | |
| RoHS (all Countries) Substances | All Components and Materials | ≤ 0.1 % (1000 ppm), If greater, report the exemption being claimed | EU RoHS Significant Customer Requirement | Yes | |

| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|--|------------------------------|--|--|---|--|
| SCCPs (Short Chain Chlorinated Paraffins) with the molecular formula: $C_xH_{(2x-y+2)}Cl_y$, where x = 10-13 and y = 1-13 | All Components and Materials | No intentional use. Unintentional Use limited to < 0.1 % (1000 ppm) and < 900 ppm Cl | EU REACH OSPAR POPs Stockholm Convention USEPA SCCPs SNUR Significant Customer Requirement | No | Qorvo also assumes that this category includes all SCCPs listed in the USEPA Toxic Release Inventory - <u>List of Toxic Chemicals within the Polychlorinated Alkanes Category and Guidance for Reporting, EPA 745-B-99-023, June 1999.</u> (There are 93 SCCPs listed in this document.) |

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| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|--|--|--|---|---|---|
| | Chemical products sold to Qorvo | Report the presence of any SCCP compounds | USEPA TRI | No | |
| Selenium Compounds | Chemical products sold to Qorvo | Report the presence of any Selenium compounds | Significant Customer Requirement USEPA TRI | No | |
| Silicon Compounds | All Components and Materials | Report the presence of any Silicon compounds | Significant Customer Requirement | No | |
| Silver Compounds | Chemical products sold to Qorvo | Report the presence of any Silver compounds | Significant Customer Requirement USEPA TRI | No | |
| Skin Sensitizers, Class 1 | Any materials that have significant exposure to skin | Report the presence of any Skin Sensitizers, Class 1, 1A, or 1B | Significant Customer Requirement | No | Qorvo does not know of any components or materials that it purchases that have significant exposure to skin |
| Strychnine Compounds | Chemical products sold to Qorvo | Report the presence of any Strychnine compounds | USEPA TRI | No | |
| Tantalum Compounds | All Components and Materials | Report the presence of any Tantalum compounds | Conflict Free Sourcing Initiative (CFSI) Significant Customer Requirement US Dodd-Frank US SEC Conflict Minerals | No | |
| Tetrabromobisphenol A (TBBPA) CAS No. 79-94-7 | All Components and Materials | No intentional use. Unintentional Use limited to < 0.09 % (900 ppm) and < 900 ppm Br | Significant Customer Requirement | No | |
| Thallium Compounds | Chemical products sold to Qorvo | Report the presence of any Thallium compounds | USEPA TRI | No | |
| Tin Compounds | All Components and Materials | Report the presence of any Tin compounds | Conflict Free Sourcing Initiative (CFSI) Significant Customer Requirement US Dodd-Frank US SEC Conflict Minerals | No | |
| Toluene CAS No. 108-88-3 | All Components and Materials | Reporting is required if the substance exceeds 0.1 % (1000 ppm) | Significant Customer Policy | No | |

| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|---|------------------------------|---|---|---|---|
| | Use in Manufacturing process | Prohibited from use in manufacturing process | ACGIH China GB 2.1-2007 NIOSH Significant Customer Policy | Yes, Air quality monitoring required if used in manufacturing process | In cases where a variance from this requirement is requested by manufacturing operations associated with the manufacture of Qorvo products, the supplier must show by 3 rd party testing that the breathing zone in the process are < 100 mg/m ³ (26 ppm) |
| 1,2,4-Trichlorobenzene CAS No. 120-82-1 | All Components and Materials | ≤ 0.1 % (1000 ppm) | Significant Customer Requirement | No | |
| Tris(1,3-dichloro-2-propyl) Phosphate (TDCPP) CAS No. 13674-87-8 | All Components and Materials | No intentional use. Unintentional Use limited to < 0.1 % (1000 ppm) and < 900 ppm Cl | California Prop 65 D.C. Law 21-108 Significant Customer Requirement Vermont Act 85 Washington CHCC | No | |
| Tris(2-Chloro-1-methylethyl) Phosphate (TCPP) CAS No. 13674-84-5 | All Components and Materials | No intentional use. Unintentional Use limited to < 0.1 % (1000 ppm) and < 900 ppm Cl | Significant Customer Requirement Vermont Act 85 | No | |
| Tris(2-chloroethyl) Phosphate (TCEP) CAS No. 115-96-8 | All Components and Materials | No intentional use. Unintentional Use limited to < 0.1 % (1000 ppm) and < 900 ppm Cl | California Prop 65 D.C. Law 21-108 EU CLP (Reproductive Toxin) EU REACH Significant Customer Requirement Vermont Act 85 Washington CHCC | No | |
| 2,4,6-Tris(tert-butyl)phenol (TTBP) CAS No. 732-26-3 | All Components and Materials | No intentional use | USEPA TSCA - PBTs Significant Customer Requirement | No | |

| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|---|--|--|---|---|----------|
| Tungsten Compounds | All Components and Materials | Report the presence of any Tungsten compounds | Conflict Free Sourcing Initiative (CFSI) Significant Customer Requirement US Dodd-Frank US SEC Conflict Minerals | No | |
| USEPA Significant New Uses for Specific Chemicals | All Components and Materials | Ensure that if any substances used are under a SNUR, meet the requirements as specified in 40 CFR 721 | USEPA SNURs | No | |
| USEPA Toxic Release Inventory Chemicals | All Components and Materials | Report the presence of these chemicals in any chemical products | USEPA TRI | No | |
| USEPA TSCA Restricted Chemicals | All Components and Materials | No intentional use | USEPA TSCA | No | |
| UV-320 CAS No. 3846-71-7 | See (DBHP)BT OR UV-320 OR Phenol, 2-(2H-Benzotriazol-2-Yl)-4,6-Bis(1,1-Dimethylethyl)- CAS No. 3846-71-7 | | | | |
| Vanadium Compounds | All Components and Materials | Report the presence of any Vanadium compounds | USEPA TRI | No | |
| Volatile Organic Compounds (VOCs) | All Components and Materials | Ensure that if materials used are within scope, they meet requirements as specified in the standards | GB-30981-2020 GB-38507-2020 GB-33372-2020 Significant Customer Requirement | Yes | |
| Warfarin Compounds | All Components and Materials | Report the presence of any Warfarin compounds | USEPA TRI | No | |
| Washington CHCC Substances | All Components and Materials | Reporting is required if the substances exceeds: Practical quantification limit (PQL) if added intentionally, 100 ppm if present as a contaminant | Significant Customer Requirement Washington CHCC | No | |
| Water-Dissociable Nitrate Compounds | All Components and Materials | Report the presence of any Water-Dissociable Nitrate Compounds | USEPA TRI | No | |
| Xylenes CAS No Name 108-38-3 <i>m</i> -Xylene 95-47-6 <i>o</i> -Xylene 106-42-3 <i>p</i> -Xylene 1330-20-7 Xylenes, mixed | Use in Manufacturing process | Prohibited from use in manufacturing process | ACGIH China GB 2.1-2007 NIOSH Significant Customer Policy | No | |

| | | |
|---|--|---------------|
|  | Qorvo Banned and Restricted Substances Specification | Page 43 of 52 |
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| Substance or Substance Category | Material or Process | Limits (Homogeneous Material Level) | Reference | Analysis Required (See SPE-001202 for acceptable methods) | Comments |
|---------------------------------|------------------------------|---|-----------|---|----------|
| Zinc Compounds | All Components and Materials | Report the presence of any Zinc Compounds | USEPA TRI | No | |

| | | |
|---|--|---------------|
|  | Qorvo Banned and Restricted Substances Specification | Page 44 of 52 |
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7 Quality Records

Not Applicable

8 Appendix

8.1 Appendix 1

Appendix 1

Statement of Conformance to Qorvo Banned and Restricted Substances Specification (SPE-001275)

An authorized signature below confirms the supplier mentioned has read, understands, and conforms to Qorvo Banned and Restricted Substances Specification (SPE-001275).

Supplier Information:

| | |
|-------------------|--|
| Supplier Name | |
| Supplier Address | |
| Contact Name* | |
| Contact Title | |
| Contact Telephone | |
| Contact Email | |

* Company representative for Product Compliance. If there are different contacts for material declarations, lab reports, conflict minerals, etc., please list all contacts.

All raw materials, parts, or products supplied to Qorvo meet the Qorvo Banned and Restricted Substances Specification (SPE-001275). If there are situations where the Supplier does not meet Qorvo substance requirements, please list the substance(s) which violate the Qorvo Banned and Restricted Substances Specification (SPE-001275) below and inform the Qorvo representative that you received this form from.

| Substance (CAS Number) | Location and Use in Product or Material | Phase Out Date |
|------------------------|---|----------------|
| | | |
| | | |
| | | |

The Supplier declares that the Supplier has implemented a Product Compliance Management System that meets the requirements listed in the Qorvo Banned and Restricted Substances Specification (SPE-001275):

| Requirement | Yes or No | Comment or Document Identification that meets this requirement |
|---|-----------|--|
| All documentation regarding Product Compliance is maintained within a document control system that allows traceability to the products and to the organizations that created the documents. | | |



| Requirement | Yes or No | Comment or Document Identification that meets this requirement |
|---|-----------|--|
| Supplier maintains all documentation supporting material declarations, certificates of compliance, and analytical reports for a minimum of 10 years. | | |
| Supporting documentation is checked for consistency between material declarations, MSDSs, and/or analytical reports. Discrepancies are resolved. | | |
| Supplier agrees to notify Qorvo of any changes in material composition of the components or materials provided to Qorvo, and update any applicable documentation (e.g., material declarations, certificates of compliance, 3 rd party lab reports, Conflict Mineral Reporting Templates, etc.) | | |
| Supplier has a system that provides full material disclosure for the products purchased by Qorvo that meets the requirements of Section 5. | | |
| Supplier has a system that provides certificates of compliance for the products purchased by Qorvo for RoHS Compliance, absence or presence of SVHCs, absence or presence of PFOS, and absence or presence of substances listed in Table 1. | | |
| The Supplier has proactively undertaken such due diligence and continuous monitoring activities of both direct and indirect supply chains as are reasonably appropriate to assure the metals (Tin, Tantalum, Tungsten, Gold, and Cobalt) are sourced from "conflict free" mines. | | |
| The Supplier will provide Qorvo with updated CMRTs twice per year (mid-summer and end-of-year). The Supplier will work with its supply chain on any information requests from Qorvo, or any requests from Qorvo to remove particular smelters from its supply chain. | | |
| If the material purchased from the Supplier becomes incorporated into Qorvo Mobile Division products, the Supplier agrees to analyze its products at the homogeneous material level annually using a competent external laboratory. These analyses must meet the requirements listed in SPE-001202. Suppliers can contact Qorvo at QorvoGreen@Qorvo.com to find out if their products are used in Qorvo's Mobile Products Division. | | |

| Requirement | Yes or No | Comment or Document Identification that meets this requirement |
|---|-----------|--|
| The Supplier requires its suppliers to have a Product Compliance Management System that meets or is equivalent to the requirements listed above. If the Supplier does not require this, please explain in a written document how the Supplier ensures that its supply chain meets the requirements listed in this document. | | |

Are there any other issues, concerns, questions, or suggestions that the Supplier would like to share with Qorvo regarding compliance to this specification?

| Section | Page No. | Comment |
|---------|----------|---------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

The person signing below certifies that the above-named Supplier has duly authorized them to sign on behalf of the Supplier.

| | |
|--------------|--|
| Signature | |
| Printed Name | |
| Title | |
| Date | |

9 Revision History

| Revision | Create Date (mm/dd/yyyy) | Description of Change | Initiator of Change |
|----------|-----------------------------|---|---------------------|
| A | 07/11/2017 | <p>Renumbered this specification from QAL-21-1028 to SPE-001275 to match new Qorvo documentation requirements. Removed 3rd Party Lab Testing requirements for Suppliers to SPE-001202. Updated to Rev H of FOR-000469. Updated all requirements to match latest "significant" customer specifications.</p> <ul style="list-style-type: none"> • Removed "2-(2H-benzotriazol-2-yl) - 4,6-ditertpentylphenol OR UV-328 CAS No. 25973-55-1" requirements as Significant Customer dropped this requirement. • Removed "Bis(2-methoxyethyl) ether CAS No. 111-96-6" requirements as Significant Customer dropped this requirement. • Removed "Borate Compounds" requirements as Significant Customer dropped this requirement. These substances are already covered under REACH requirements. • Removed "N,N-dimethylacetamide (DMAC) CAS No. 127-19-5" requirements as Significant Customer dropped this requirement. These substances are already covered under REACH requirements. • Removed "Ethylene glycol dimethyl ether (EGDME) CAS No. 110-71-4" requirements as Significant Customer dropped this requirement. These substances are already covered under REACH requirements. • Removed "4-(1,1,3,3-tetramethylbutyl) phenol CAS No. 140-66-9" requirements as Significant Customer dropped this requirement. These substances are already covered under REACH requirements. • Removed "Trixylyl phosphate (TXP) CAS No. 25155-23-1" requirements as Significant Customer dropped this requirement. These substances are already covered under REACH | John Sharp |

| Revision | Create Date (mm/dd/yyyy) | Description of Change | Initiator of Change |
|----------|--------------------------|--|---------------------|
| | | requirements. | |
| B | 08/13/2018 | Annual update. Updated Conflict Minerals references from CFSI to RMI. Added entry for "Octylphenol and its ether" to Table 1. | M. Mybeck |
| C | 10/1/2019 | Annual Update. Updated Product Compliance Definitions reference. Updated links in External References. Updated "Analysis Required" column of Table 1 to align with SPE-001202. Added the following substances to Table 1: <ul style="list-style-type: none"> • Bisphenol F, CAS No. 620-92-8 • Bisphenol S, CAS Nos. 2467-02-9; 1333-16-0; 80-09-1 | M. Mybeck |
| D | 9/30/2020 | Annual Update. Updated Roles and Responsibilities to reflect updates to COR.103. Added new External References. Updated links and removed obsolete entries in External References. Updated Section 5 formatting. Made the following changes to Section 6, Table 1: <ul style="list-style-type: none"> • Aluminum Compounds added • Brominated Organic Solvents added • Chlorinated Organic Solvents, updated limit • N,N-dimethylformamide (DMF), CAS # 68-12-2, added • Endocrine Disrupting Chemicals (EDCs) added • Flame Retardants added • IEC 62474 substances added • Indium Phosphide added • Magnesium Compounds added • Mica added • Per- and Polyfluoroalkyl Substances (PFAS) added • PFOA split out from PFOS, updated limit • Plasticizers added • Volatile Organic Compounds (VOCs) added | M. Mybeck |
| E | 9/30/2021 | Annual Update. Updated links and removed obsolete entries in External References. | M. Mybeck |

| Revision | Create Date (mm/dd/yyyy) | Description of Change | Initiator of Change |
|----------|-----------------------------|---|---------------------|
| | | <p>Made the following changes to Section 6, Table 1:</p> <ul style="list-style-type: none"> • Benzene – updated Limit • Biocidal Substances added • Bisphenol Chemicals (Various) added • Brominated Organic Solvents – updated process and limit • Chlorinated Organic Solvents – updated process and limit • Cobalt Compounds – added reporting requirement for materials • Copper Compounds – added reporting requirement for materials • Decabromodiphenylethane (DBDPE), CAS No. 84852-53-9, added • DechloranePlus™, CAS No. 13560-89-9, added • N-Ethyl-2-pyrrolidone, CAS No. 2687-91-4, added • Formaldehyde – updated limit • N-Hexane – updated limit • Melamine, CAS No. 108-78-1, added • Mercury – updated limit • Methanol, CAS No. 67-56-1, added • NMP – updated reporting limit • Phenol, isopropylated phosphate (3:1) (PIP (3:1)), CAS No. 68937-41-7, added • Polybrominated Diphenyl Ethers (PBDEs) – updated materials and limits • N-Propyl Bromide, removed (included under Brominated Organic Solvents) • PFBS and related substances added • PFCAs (C9-C14), their salts and related substances added • PFHxA, its salts and related substances added • PFHxS, its salts and related substances added • REACH (EU) Substances of Very High Concern (SVHCs) – updated limit | |
| F | 9/30/2022 | Annual Update. Updated External References. Made the following changes to | M. Mybeck |

| Revision | Create Date (mm/dd/yyyy) | Description of Change | Initiator of Change |
|----------|-----------------------------|---|---------------------|
| | | <p>Section 6, Table 1:</p> <ul style="list-style-type: none"> • Benzidine-Based Dyes added • GADSL Substances added • Hexachlorobenzene, CAS No. 118-74-1, added • Lithium Compounds added • Mineral Oil Aromatic Hydrocarbons added • Neodymium Compounds added • Pentabromophenyl methyl acrylate, CAS No. 59447-55-1, added • Pentachlorothiophenol (PCTP), CAS No. 133-49-3, added • Per- and Polyfluoroalkyl Substances (PFAS) – updated limit • 2,4,6-Tris(tert-butyl)phenol (TTBP), CAS No. 732-26-3, added • USEPA TSCA Restricted Substances added | |
| G | 9/28/2023 | <p>Annual Update. Updated External References. Updated Section 1. Made the following changes to Section 6, Table 1:</p> <ul style="list-style-type: none"> • Aminoethyl ethanolamine removed • Substituted Diphenyl Amines removed • Arsenic Compounds, Limit updated • Asbestos Compounds, Limit updated • Benzidine-Based Dyes, Limit updated • Brominated Flame Retardants added • 2-Butoxy ethanol added • Cobalt Compounds, Limit updated • Cyclohexanone added • Decabromodiphenylethane (DBDPE), Limit updated • Ethanolamine added • 2-Ethoxyethanol added • 2-Ethoxyethyl acetate added • Fluorinated Greenhouse Gases added • Gallium Compounds added • Hexabromocyclodo-Decanes (HBCDDs), Limit updated • Hydrogen Fluoride added | M. Mybeck |



| Revision | Create Date (mm/dd/yyyy) | Description of Change | Initiator of Change |
|----------|--------------------------|---|---------------------|
| | | <ul style="list-style-type: none">• n-Methyl Pyrrolidone (NMP) entry updated• Neodymium Compounds, Limit updated• Nickel Compounds, Limit updated• Per- and Polyfluoroalkyl Substances (PFAS), Limit updated• PFBS and related substances, Limit updated• PFHxA, its salts and related substances, Limit updated• PFOS Compounds, Limit updated• Phthalic Anhydride added• Rare Earth Elements added• Silicon Compounds added• 1,2,4-Trichlorobenzene added | |