# Material Data Declaration Sheet - v003

*Schema Database Version: IEC 62474 X6.01*

*Substance Database Version: IEC 62474 D16.00*

## Supplier Information

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|---|---|
| **Company Name *** | Intel Corporation |
| **Response Document ID** | 41163 |
| **Company Unique ID** | 047897855 |
| **Unique ID Authority** | Dun and Bradstreet |
| **Response Date *** | 2018-11-08 |

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**Supplier Comments**

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## Product(s)

**Product Family Name:**

| Requester Item Number | Item Number * | Description | Effective Date * | Mass * | UoM* | Comment |
|---|---|---|---|---|---|---|
| | 1SG280HU00xx | 1SG280HU00xx | 2018-11-08 | 38.0000 | g | |

## Declaration

| | | |
|---|---|---|
| | Product Contains REACh SVHC above .1% of article | False |
| | Product Meets EU ROHS Requirements | True |
| | This product does not contain PVC | True |
| | This product is Low Halogen (Components): Applies only to brominated and chlorinated flame retardants (BFRs/CFRs) and PVC in the final product. The replacement of halogenated flame retardants may not be better for the environment. Intel Components as well as purchased components on the finished assembly meet the joint JEDEC/ECA JS-709B requirement. | True |
| | This product is Low Halogen (PCB): Applies Br/Cl in the PCB Laminate. The PCB / Substrate meet IEC 61249-2-21 requirements. The replacement of halogenated flame retardants may not be better for the environment | True |

## Signature

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|---|---|
| Intel Product Ecology | C=US, E=productecology@intel.com, OU="", O=Intel Corporation, CN=Intel Product Ecology |

| Part ID | Description | # of Units | Part Mass % |
|---|---|---|---|
| 1SG280HU00xx | 1SG280HU00xx | 1 | 100.0000 |

**RoHS**

| Homogenous Material Name | Material Class ID | HM Mass % | Substance Group | Reportable Application | Reporting Threshold | Above Threshold? (T/F) | Substance Mass % of HM | Exemption | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | | | Cadmium/Cadmium compounds | All, except batteries | 0.01 mass% of total Cd in homogenous | false | | | |
| | | | Chromium (VI) Compounds | All | 0.1 mass% of total Cr+6 in homogenous | false | | | |
| | | | Lead/Lead Compounds | All, except for: 1. batteries, 2. surface | 0.1 mass% of total Pb in homogenous | false | | | |
| | | | Mercury/Mercury Compounds | All, except batteries | Intentionally Added or 0.1 mass% of total | false | | | |
| | | | Polybrominated Biphenyls (PBBs) | All | 0.1 mass% in homogenous material | false | | | |
| | | | Polybrominated Diphenylethers (PBDEs) | All | 0.1 mass% in homogenous material | false | | | |

**Low Halogen**

| Homogenous Material Name | Material Class ID | HM Mass % | Substance Group | Reportable Application | Reporting Threshold | Above Threshold? (T/F) | Substance Mass % of HM | Comments |
|---|---|---|---|---|---|---|---|---|
| | | | Brominated flame retardants (other than | Printed wiring board laminate | 0.09 mass% total bromine content in | false | | |
| | | | Brominated flame retardants (other than | Plastic materials except printed wiring board | 0.1 mass% of bromine in plastic | false | | |
| | | | Chlorinated Flame Retardants (CFR) | Plastic materials except printed wiring board | 0.1 mass% chlorine in plastic materials | false | | |
| | | | Chlorinated Flame Retardants (CFR) | Printed Wiring Board (PWB) Laminates | 0.09 mass% total chlorine content in | false | | |
| | M-012 | | PVC | | | false | | |

**Other Declarable Substances**

| Substance Group | Substance | CAS # | Reportable Application | Reporting Threshold | Above Threshold? (T/F) | Substance Mass (% of Article) | Comments |
|---|---|---|---|---|---|---|---|
| 1,6,7,8,9,14,15,16,17,17, 18,18-Dodecachloropent | | | All | 0.1 mass% of article | false | | |
| 4-Nonylphenol, branched and linear, ethoxylated | | | All | 0.1 mass% of article | false | | |
| Alkanes, C10-13, chloro (Short Chain Chlorinated | | | All | Intentionally added or 0.1 mass% of article | false | | |
| Aluminosilicate Refractory Ceramic | | | All | 0.1 mass% of article | false | | |
| Asbestos | | | All | Intentionally added | false | | |
| Cadmium/Cadmium compounds | | | Batteries | 0.001% by weight of battery | false | | |
| Dibutyltin (DBT) compounds | | | All | 0.1 mass% of tin in the part | false | | |

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|---|---|---|---|---|---|---|---|
| Dioctyltin (DOT) compounds | | | (a) textile and leather articles intended to come | 0.1 mass% of tin in the part | false | | |
| Disodium tetraborates | | | All | 0.1 mass% of article | false | | |
| Fluorinated Greenhouse Gases (PFC, SF6, HFC) | | | All | Intentionally Added | false | | |
| Hexabromocyclododecane (HBCDD) | | | All | Intentionally added or 0.01 mass% of article | false | | |
| Hexahydromethylphthalic anhydride | | | All | 0.1 mass% of article | false | | |
| Lead/Lead Compounds | | | Consumer products designed or intended | 0.01 mass% | false | | |
| Lead/Lead Compounds | | | Batteries | 0.004 mass% of battery | false | | |
| Mercury/Mercury Compounds | | | Batteries | Intentionally added or 0.0001 mass% of battery | false | | |
| Nickel/Nickel Compounds | | | All, where prolonged skin contact is expected | Intentionally Added | false | | |
| Nonadecafluorodecanoic acid (PFDA) and its | | | All | 0.1 mass% of article | false | | |
| Ozone Depleting Substances (CFC, Halon, | | | All | Intentionally Added | false | | |
| Perchlorates | | | All | 6 x 10 ^-7 mass% of battery or product part | false | | |
| Perfluorohexane-1-sulphonic acid and its salts | | | All | 0.1 mass% of article | false | | |
| Perfluorononan-1-oic-acid and its sodium and | | | All | 0.1 mass% of article | false | | |
| Polychlorinated Biphenyls (PCBs) and | | | All | Intentionally added | false | | |
| Polychlorinated Naphthalenes (PCNs) | | | All | Intentionally added | false | | |
| Radioactive substances | | | All | Intentionally added | false | | |
| Tri-substituted organostannic | | | All | Intentionally added or 0.1 mass% of tin in the part | false | | |
| Zirconia Aluminosilicate Refractory Ceramic | | | All | 0.1 mass% of article | false | | |
| | [Phthalato(2-)]dioxotrilead | 69011-06-9 | Heat stabilizer for plastics, for example for | 0.1 mass% of article | false | 0.0000 | |
| | 1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters | 68515-51-5, 68648-93-1 | Plasticisers, lubricants, adhesives, coatings, | 0.1 mass% of article | false | 0.0000 | |
| | 1,2-Benzenedicarboxylic acid, di-C6-8-branched | 71888-89-6 | Plasticizer, dye, pigment, paint, ink, adhesive, | 0.1 mass% of article | false | 0.0000 | |
| | 1,2-Benzenedicarboxylic acid, di-C7-11-branched | 68515-42-4 | Plasticizer, dye, pigment, paint, ink, adhesive, | 0.1 mass% of article | false | 0.0000 | |
| | 1,2-Benzenedicarboxylic acid, dihexyl ester, | 68515-50-4 | Used as a plasticizer for certain plastics and | 0.1 mass% of article | false | 0.0000 | |
| | 1,2-Benzenedicarboxylic acid, dipentylester, | 84777-06-0 | Plasticizer in plastic materials in specialist | 0.1 mass% of article | false | 0.0000 | |
| | 1,2-bis(2-methoxyethoxy) ethane (TEGDME; | 112-49-2 | Solvent may be used in battery electrolytes for | 0.1 mass% of article | false | 0.0000 | |
| | 1,2-Diethoxyethane | 629-14-1 | Solvent used in electrolytes for lithium | 0.1 mass% of article | false | 0.0000 | |
| | 1,2-dimethoxyethane; ethylene glycol dimethyl | 110-71-4 | Solvent used in battery electrolytes for lithium | 0.1 mass% of article | false | 0.0000 | |
| | 1,3-propanesultone | 1120-71-4 | Electrolyte fluid of rechargeable lithium ion | 0.1 mass% of article | false | 0.0000 | |
| | 2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl) | 36437-37-3 | UV stabilizer | 0.1 mass% of article | false | 0.0000 | |
| | 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol | 25973-55-1 | UV stabilizer | 0.1 mass% of article | false | 0.0000 | |

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|---|---|---|---|---|---|---|---|
| | 2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol | 3864-99-1 | UV stabilizer | 0.1 mass% of article | false | 0.0000 | |
| | 2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320) | 3846-71-7 | UV-stabilizer in adhesives, paints, | Intentionally added or 0.1 mass% of article | false | 0.0000 | |
| | 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo | 15571-58-1 | PVC stabilizer | 0.1 mass% of article | false | 0.0000 | |
| | 4-(1,1,3,3-tetramethylbutyl)phenol | 140-66-9 | Unreacted process chemical | 0.1 mass% of article | false | 0.0000 | |
| | 4,4'-isopropylidenediphenol | 80-05-7 | Antioxidant for plasticizer and PVC, ink, | Intentionally added or 0.1 mass% of article | false | 0.0000 | |
| | 4-Aminoazobenzene | 60-09-3 | Used as yellow pigment and in inks, including inks | 0.1 mass% of article | false | 0.0000 | |
| | Ammonium pentadecafluorooctanoat | 3825-26-1 | APFO is used as an emulsion stabilizer to | 0.1 mass% of article | false | 0.0000 | |
| | Benz[a]anthracene | 56-55-3; 1718-53-2 | Impurities in carbon black, which is used as | 0.1 mass% of article | false | 0.0000 | |
| | Benzo[a]anthracene | 56-55-3 | Impurities in carbon black, which is used as | 0.0001 mass% of the plastic or rubber part | false | 0.0000 | |
| | Benzo[a]anthracene | 56-55-3 | Impurities in carbon black, which is used as | 0.00005 mass% of the plastic or rubber part | false | 0.0000 | |
| | Benzo[a]pyrene | 50-32-8 | Impurities in carbon black, which is used as | 0.0001 mass% of the plastic or rubber part | false | 0.0000 | |
| | Benzo[a]pyrene | 50-32-8 | Impurities in carbon black, which is used as | 0.00005 mass% of the plastic or rubber part | false | 0.0000 | |
| | Benzo[b]fluoranthene | 205-99-2 | Impurities in carbon black, which is used as | 0.0001 mass% of the plastic or rubber part | false | 0.0000 | |
| | Benzo[b]fluoranthene | 205-99-2 | Impurities in carbon black, which is used as | 0.00005 mass% of the plastic or rubber part | false | 0.0000 | |
| | Benzo[def]chrysene | 50-32-8 | Impurities in carbon black, which is used as | 0.1 mass% of article | false | 0.0000 | |
| | Benzo[e]pyrene | 192-97-2 | Impurities in carbon black, which is used as | 0.0001 mass% of the plastic or rubber part | false | 0.0000 | |
| | Benzo[e]pyrene | 192-97-2 | Impurities in carbon black, which is used as | 0.00005 mass% of the plastic or rubber part | false | 0.0000 | |
| | Benzo[ghi]perylene | 191-24-2 | Impurities in carbon black, which is used as | 0.1 mass% of article | false | 0.0000 | |
| | Benzo[j]fluoranthene | 205-82-3 | Impurities in carbon black, which is used as | 0.0001 mass% of the plastic or rubber part | false | 0.0000 | |
| | Benzo[j]fluoranthene | 205-82-3 | Impurities in carbon black, which is used as | 0.00005 mass% of the plastic or rubber part | false | 0.0000 | |
| | Benzo[k]fluoranthene | 207-08-9 | Impurities in carbon black, which is used as | 0.0001 mass% of the plastic or rubber part | false | 0.0000 | |
| | Benzo[k]fluoranthene | 207-08-9 | Impurities in carbon black, which is used as | 0.00005 mass% of the plastic or rubber part | false | 0.0000 | |
| | Benzyl butyl phthalate (BBP) | 85-68-7 | Plasticizer, dye, pigment, paint, ink, adhesive, | 0.1 mass% in homogenous material | false | 0.0000 | |
| | Beryllium Oxide | 1304-56-9 | Ceramics | 0.1 mass% | false | 0.0000 | |
| | Bis (2-ethylhexyl)phthalate | 117-81-7 | Plasticizer, dye, pigment, paint, ink, adhesive, | 0.1 mass% in homogenous material | false | 0.0000 | |
| | Bis(2-methoxyethyl) ether | 111-96-6 | Electrolyte in lithium batteries | 0.1 mass% of article | false | 0.0000 | |
| | Bis(2-methoxyethyl) phthalate | 117-82-8 | Plasticizer | 0.1 mass% of article | false | 0.0000 | |
| | Bis(pentabromophenyl) ether | 1163-19-5 | Flame retardant | 0.1 mass% of article | false | 0.0000 | |
| | Bis(tributyltin) oxide (TBTO) | 56-35-9 | Antiseptic, antifungal agent, paint, pigment, | Intentionally added or 0.1 mass% of article | false | 0.0000 | |
| | Boric Acid | 10043-35-3, 11113-50-1 | In wood veneers/ pressed wooden panels | 0.1 mass% of article | false | 0.0000 | |
| | Cadmium | 7440-43-9 | Pigments, anti-corrosion surface treatments, | 0.1 mass% of article | false | 0.0000 | |

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|---|---|---|---|---|---|---|---|
| | Cadmium hydroxide | 21041-95-2 | It is generated in the anodes of | 0.1 mass% of article | false | 0.0000 | |
| | Cadmium oxide | 1306-19-0 | Relay contact; photodiode voltaic cell, | 0.1 mass% of article | false | 0.0000 | |
| | Cadmium sulphide | 1306-23-6 | Used in photo-resistors, solar cells and | 0.1 mass% of article | false | 0.0000 | |
| | Chrysen | 218-01-9 | Impurities in carbon black, which is used as | 0.0001 mass% of the plastic or rubber part | false | 0.0000 | |
| | Chrysen | 218-01-9 | Impurities in carbon black, which is used as | 0.00005 mass% of the plastic or rubber part | false | 0.0000 | |
| | Chrysene | 218-01-9; 1719-03-5 | Impurities in carbon black, which is used as | 0.1 mass% of article | false | 0.0000 | |
| | Cobalt dichloride | 7646-79-9 | Pneumatic panels to indicate water | 0.1 mass% of article | false | 0.0000 | |
| | Decamethylcyclopentasiloxane | 541-02-6 | Siloxanes are monomers used to manufacture | 0.1 mass% of article | false | 0.0000 | |
| | Diarsenic pentoxide | 1303-28-2 | Additive in wood, metal, glass and plastics | 0.1 mass% of article | false | 0.0000 | |
| | Diarsenic trioxide | 1327-53-3 | Additive in wood, metal, glass and plastics | 0.1 mass% of article | false | 0.0000 | |
| | Dibenzo[a,h]anthracene | 53-70-3 | Impurities in carbon black, which is used as | 0.0001 mass% of the plastic or rubber part | false | 0.0000 | |
| | Dibenzo[a,h]anthracene | 53-70-3 | Impurities in carbon black, which is used as | 0.00005 mass% of the plastic or rubber part | false | 0.0000 | |
| | Diboron trioxide | 1303-86-2 | Found in wood veneers, glass/fiberoptics and | 0.1 mass% of article | false | 0.0000 | |
| | Dibutyl phthalate (DBP) | 84-74-2 | Plasticizer, dye, pigment, paint, ink, adhesive, | 0.1 mass% in homogenous material | false | 0.0000 | |
| | Dibutyltin dichloride (DBTC) | 683-18-1 | Ingredient in some paint thinner and as heat | 0.1 mass% of article | false | 0.0000 | |
| | Dicyclohexyl phthalate | 84-61-7 | Plasticizer, dye, pigment, paint, ink, manufacture | 0.1 mass% of article | false | 0.0000 | |
| | Diisobutyl phthalate | 84-69-5 | Plasticizer, dye, pigment, paint, ink, adhesive, | 0.1 mass% in homogenous material | false | 0.0000 | |
| | Di-isodecyl phthalate (DIDP) | 68515-49-1, 26761-40-0 | Plasticizer, dye, pigment, paint, ink, | Intentionally added | false | 0.0000 | |
| | Diisononyl phthalate (DINP) | 28553-12-0, 68515-48-0 | Used as a plasticizer for PVC | Intentionally added | false | 0.0000 | |
| | Diisopentylphthalate | 605-50-5 | Plasticizer in plastic materials in specialist | 0.1 mass% of article | false | 0.0000 | |
| | Dimethyl Fumarate (DMF) | 624-49-7 | Biocide, mold prevention treatment of electronic | 0.00001 mass% of the part | false | 0.0000 | |
| | Di-n-hexyl Phthalate (DnHP) | 84-75-3 | Plasticizer, dye, pigment, paint, ink, adhesive, | Intentionally added or 0.1 mass% of article | false | 0.0000 | |
| | Dioxobis(stearato)trilead | 12578-12-0 | Heat stabilizer for plastics, for example for | 0.1 mass% of article | false | 0.0000 | |
| | Dipentyl phthalate (DPP) | 131-18-0 | Plasticizer in PVC and nitrocellulose resin and | 0.1 mass% of article | false | 0.0000 | |
| | Disodium 3,3'-[[1,1'-biphenyl]-4,4'-d | 573-58-0 | Dye for textiles and paper | 0.1 mass% of article | false | 0.0000 | |
| | Disodium 4-amino-3-[[4'-[(2,4-diami | 1937-37-7 | Used in ink for printers | 0.1 mass% of article | false | 0.0000 | |
| | Disodium octaborate | 12008-41-2 | Wooden veneer sheets and pressed wooden | 0.1 mass% of article | false | 0.0000 | |
| | Dodecamethylcyclohexasiloxane | 540-97-6 | Siloxanes are monomers used to manufacture | 0.1 mass% of article | false | 0.0000 | |
| | Fatty acids, C16-18, lead salts | 91031-62-8 | Heat stabilizer for plastics, for example for | 0.1 mass% of article | false | 0.0000 | |
| | Formaldehyde | 50-00-0 | Textiles | 0.0075 mass % of textile | false | 0.0000 | |
| | Imidazolidine-2-thione; (2-imidazoline-2-thiol) | 96-45-7 | used as a catalyst in some acrylic adhesive | 0.1 mass% of article | false | 0.0000 | |

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|---|---|---|---|---|---|---|---|
| | Lead | 7439-92-1 | Steel, aluminum and copper alloys, lead acid | 0.1 mass% of article | false | 0.0000 | |
| | Lead chromate | 7758-97-6 | Colorant in plastics; Colorant in paint | 0.1 mass% of article | false | 0.0000 | |
| | Lead chromate molybdate sulphate red (C.I. Pigment | 12656-85-8 | Colorant in plastics; Colorant in red paint | 0.1 mass% of article | false | 0.0000 | |
| | Lead cyanamidate | 20837-86-9 | Used in anticorrosion coatings e.g. steel articles | 0.1 mass% of article | false | 0.0000 | |
| | Lead dinitrate | 10099-74-8 | Heat stabilizer in nylon and polyesters, also used | 0.1 mass% of article | false | 0.0000 | |
| | Lead oxide sulfate | 12036-76-9 | Heat stabilizer for PVC used for wiring and | 0.1 mass% of article | false | 0.0000 | |
| | Lead sulfochromate yellow (C.I. Pigment | 1344-37-2 | Colorant in plastics; Colorant in yellow paint | 0.1 mass% of article | false | 0.0000 | |
| | Lead titanium trioxide | 12060-00-3 | In piezoelectric components, ultrasound | 0.1 mass% of article | false | 0.0000 | |
| | Lead titanium zirconium oxide | 12626-81-2 | In piezoelectric components, ultrasound | 0.1 mass% of article | false | 0.0000 | |
| | N,N-dimethylformamide | 68-12-2 | Used as electrolyte in electrolytic capacitors | 0.1 mass% of article | false | 0.0000 | |
| | N-pentyl-isopentylphthalate | 776297-69-9 | Plasticizer in plastic materials in specialist | 0.1 mass% of article | false | 0.0000 | |
| | Octamethylcyclotetrasiloxane | 556-67-2 | Siloxanes are monomers used to manufacture | 0.1 mass% of article | false | 0.0000 | |
| | Orange lead (lead tetroxide) | 1314-41-6 | Used in rust-proof primer paints | 0.1 mass% of article | false | 0.0000 | |
| | Pentadecafluorooctanoic acid (PFOA) | 335-67-1 | PFOA is used as an emulsion stabilizer to | 0.1 mass% of article | false | 0.0000 | |
| | Pentalead tetraoxide sulphate | 12065-90-6 | Heat stabilizer for plastics; for example, | 0.1 mass% of article | false | 0.0000 | |
| | Pentazinc chromate octahydroxide | 49663-84-5 | Colorant | 0.1 mass% of article | false | 0.0000 | |
| | Potassium hydroxyoctaoxodizincatedi | 11103-86-9 | Paint, anti-corrosion | 0.1 mass% of article | false | 0.0000 | |
| | Pyrochlore, antimony lead yellow | 8012-00-8 | Used as yellow pigment for coloring plastics and | 0.1 mass% of article | false | 0.0000 | |
| | reaction mass of 2-ethylhexyl | | PVC stabilizer | 0.1 mass% of article | false | 0.0000 | |
| | Silicic acid (H2Si2O5), barium salt (1:1), | 68784-75-8 | Used in UV emitting light bulbs and lamps | 0.1 mass% of article | false | 0.0000 | |
| | Strontium chromate | 7789-06-2 | Pigment; corrosion resistant coating | 0.1 mass% of article | false | 0.0000 | |
| | Sulfurous acid, lead salt, dibasic | 62229-08-7 | Heat stabilizer for PVC, for example for wiring | 0.1 mass% of article | false | 0.0000 | |
| | Terphenyl, hydrogenated | 61788-32-7 | Plasticizers, sealants, epoxy adhesives, paints | 0.1 mass% of article | false | 0.0000 | |
| | Tetralead trioxide sulphate | 12202-17-4 | Heat stabilizer for PVC, for example for wiring | 0.1 mass% of article | false | 0.0000 | |
| | Trilead dioxide phosphonate | 12141-20-7 | Heat stabilizer for PVC, for example for wiring | 0.1 mass% of article | false | 0.0000 | |
| | Tris(2-chloroethyl)phosphate | 115-96-8 | Flame retardant | 0.1 mass% of article | false | 0.0000 | |
| | Trixylyl phosphate | 25155-23-1 | Used as a plasticizer for vinyl resin, cellulose | 0.1 mass% of article | false | 0.0000 | |