

Material Data Declaration Sheet - v003

Schema Database Version: IEC 62474 X6.01

Substance Database Version: IEC 62474 D14.00



Supplier Information

Company Name *	Intel Corporation
Response Document ID	31855
Company Unique ID	047897855
Unique ID Authority	Dun and Bradstreet
Response Date *	2018-02-28

Contact Name *	Larson, Shane P
Contact Title *	Intel Product Ecology
Contact Phone *	1-800-628-8686
Contact Email *	productecology@intel.com

Supplier Comments <http://qdms.intel.com> - Intel certifies that it gathered the provided information and such information is true and correct to the best of its knowledge and belief, as of the date that Intel completes this form. Intel acknowledges that Customer will rely on this certification in determining the compliance of its products. Customer acknowledges that Intel may have relied on information provided by others in completing this form, and that Intel may not have independently verified such information. However, in situations where Intel has not independently verified information provided by others, Intel agrees that, at a minimum, its suppliers have provided certifications regarding their contributions to the part(s), and those certifications are at least as comprehensive as the certification in this paragraph. If the Customer and the Intel enter into a written agreement with respect to the identified part(s), the terms and conditions of that agreement, including any warranty rights and/or remedies provided as part of that agreement, will be the sole and exclusive source of the Intel's liability and the Customer's remedies for issues that arise regarding information the Intel provides in this form. In the absence of such written agreement, the warranty rights and/or remedies of Intel's Standard Terms and Conditions of Sale applicable to such part shall apply.

Product(s)

Product Family Name:

Requester Item Number	Item Number *	Description	Effective Date *	Mass *	UoM*	Comment
	963543	963543	2018-02-28	31.10000	g	

Declaration

	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.	
LHPLA		True
PVC	This product does not contain PVC	True
SVHC	Product Contains REACH SVHC above .1% of article	False
RoHS.Compliant	Product Meets EU RoHS Directive 2 2011/65/EU Requirements	True

Signature

Intel Product
Ecology

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

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
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		
Diocetyl tin (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) and all major			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		
Perfluorononane-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-)]dioxotriole	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
	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)pheno	3864-99-1	UV stabilizer	0.1 mass% of article	false		0.0000
	2-benzotriazol-2-yl-4,6-ditert-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 pentadecafluorooctanoate	3825-26-1	APFO is used as an emulsion stabilizer to	0.1 mass% of article	false	0.0000	
	Benzenamine, N-phenyl-, reaction products with	68921-45-9	Lubricating agent in motors, storage drives;	Intentionally added	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[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	
	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	

	Cobalt dichloride	7646-79-9	Pneumatic panels to indicate water	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 plastic or rubber part	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 plastic or rubber part	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	
	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'-diyl]bis(4-aminobenzoate)	573-58-0	Dye for textiles and paper	0.1 mass% of article	false	0.0000	
	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)oxy]phenyl]propanoate	1937-37-7	Used in ink for printers	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	
	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 3B)	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 3P)	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	

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 hydroxyoctaoxodizincated	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 (H ₂ SiO ₅), 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	
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	