

Material Data Declaration Sheet - v003

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Substance Database Version: IEC 62474 D15.00



Supplier Information

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Product(s)

Product Family Name:

Requester Item Number	Item Number *	Description	Effective Date *	Mass *	UoM*	Comment
	FH8067303692003S	FH8067303692003S	2018-06-11	42.0000	g	

Declaration

LHPLA	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
LHPWB	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
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		
Dodecachloropentacyclo [12.2.1.16.9.02.13.05.10]			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 Ozone Depleting Substances (CFC, Halon,			All	0.1 mass% of article	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-)]dioxotriolead	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-ditertbutylphenol	25973-55-1	UV stabilizer	0.1 mass% of article	false		0.0000
	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 pentadecafluorooctanoate	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
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 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
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
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
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	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
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 hydroxooctaoxidizincated	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