Material Data Declaration Sheet - v003

Version 2.0

Supplier Information

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Response Date *	2025-03-17		

Supplier Comments

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Product(s)

Product Family Name:

Requester Item Number	Item Number *	Description	Effective Date *	Mass *	UoM*	Comment
	AGME032R47AXXXX	FPGA IC AGME0320XXXX FBGA4700	2025-03-17	80.24	g	

Product Part(s)

ID*	Description	Effective Date*	Units*	% of Product Mass	Comment	
Capacitor 2	Capacitor	2025-03-17	20	0.030		
Capacitor 4	Capacitor	2025-03-17	18	0.014		
Capacitor 5	Capacitor	2025-03-17	58	0.10		
Capacitor 6	Capacitor	2025-03-17	19	0.0071		
Capacitor 7	Capacitor	2025-03-17	52	0.039		
Die 1	Die	2025-03-17	4	0.23		
Die 3	Die	2025-03-17	2	0.18		
Die 8	Die	2025-03-17	1	0.074		
Die 9	Die	2025-03-17	2	0.48		
Die 10	Die	2025-03-17	2	0.18		
Die 11	Die	2025-03-17	3	0.30		
Die 14	Die	2025-03-17	1	1.57		
Die 15	Die	2025-03-17	1	0.24		
MEMORY_PACKAGE	MEMORY_PACKAGE	2025-03-17	1	0.22		
SEALANT	SEALANT	2025-03-17	1	0.63		
Solder Spheres	Solder Spheres	2025-03-17	1	4.0066		

SOLDER_PREFORMS 12	SOLDER_PREFORMS	2025-03-17	1	0.42		
SOLDER_PREFORMS 13	SOLDER_PREFORMS	2025-03-17	1	3.027		
SOLDER-PASTE	SOLDER-PASTE	2025-03-17	1	0.012		
Substrate	Substrate	2025-03-17	1	19.34		
Thermal Plate	Thermal Plate	2025-03-17	1	68.88		
Underfill	Underfill	2025-03-17	1	0.025		

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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
UKREACH-0620	Product(s) is obsolete, no information is available	False
UKREACH-0620	Product(s) is unknown, no information is available	False
UKREACH-0620	Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH	True
EUROHS-1506	Product(s) does not meet EU RoHS requirements and is not under exemptions	False
EUROHS-1506	Product(s) is obsolete, No Information is Available	False
EUROHS-1506	Product(s) is unknown, no information is available	False
EUROHS-1506	Product(s) Meets EU RoHS Requirements by Application of the Selected Exemption(s)	False
EUROHS-1506	Product(s) Meets EU RoHS Requirements Without Any Exemptions	True

Signature

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

Part ID	Description		# of Units	Part Mass %
Capacitor 2	Capacitor		20	0.030

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
Ceramic element/Ceramics		mg	0.688		1304-28-5	Barium Oxide	ppm	600000.00	
						Misc	ppm	100000.00	
					13463-67-7	Titanium dioxide	ppm	300000.00	
Inner electrode/Nickel and Nickel alloys		mg	0.373	00031	7440-02-0	Nickel	ppm	1000000.00	
Nickel Plating Layer/Nickel plating		mg	0.011	00031	7440-02-0	Nickel	ppm	1000000.00	
Outer electrode/Copper alloys 1		mg	0.092		7440-50-8	Copper	ppm	1000000.00	
Outer electrode/Copper alloys 2		mg	0.010	00075	-	Proprietary	ppm	203883.50	
					7631-86-9	Silicon Dioxide	ppm	796116.50	
Tin Plating Layer/Tin plating		mg	0.025		7440-31-5	Tin	ppm	1000000.00	

Part ID	Description		# of Units	Part Mass %
Capacitor 4	Capacitor		18	0.014

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
Dielectric		mg	0.236		1304-28-5	Barium Oxide	ppm	635593.22	
						PROPRIETARY	ppm	33898.31	
					13463-67-7	Titanium dioxide	ppm	330508.47	
Electro-Plating 1		mg	0.019	00031	7440-02-0	Nickel	ppm	1000000.00	
Electro-Plating 2		mg	0.019		7440-31-5	Tin	ppm	1000000.00	
Inner Electrode		mg	0.110	00031	7440-02-0	Nickel	ppm	1000000.00	
Terminal Electrode		mg	0.236		7440-50-8	Copper	ppm	1000000.00	

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Part ID	Description		# of Units	Part Mass %
Capacitor 5	Capacitor		58	0.10

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
Ceramic		mg	1.221		12047-27-7	Barium Titanate	ppm	1000000.00	
Electrode finish plating		mg	0.018		7440-31-5	Tin	ppm	1000000.00	
Electrode middle plating		mg	0.014	00031	7440-02-0	Nickel	ppm	1000000.00	
Electrode under plating		mg	0.014		7440-50-8	Copper	ppm	1000000.00	
External electrodes		mg	0.049	00031	7440-02-0	Nickel	ppm	1000000.00	
Internal electrodes		mg	0.104	00031	7440-02-0	Nickel	ppm	1000000.00	

Part ID	Description		# of Units	Part Mass %
Capacitor 6	Capacitor		19	0.0071

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
Dielectric		mg	0.124		1304-28-5	Barium Oxide	ppm	645161.29	
						PROPRIETARY	ppm	16129.032	
					13463-67-7	Titanium dioxide	ppm	338709.68	
Electro-Plating-1		mg	0.012	00031	7440-02-0	Nickel	ppm	1000000.00	
Electro-Plating-2		mg	0.012		7440-31-5	Tin	ppm	1000000.00	
Inner Electrode		mg	0.080	00031	7440-02-0	Nickel	ppm	1000000.00	
Terminal Electrode		mg	0.072		7440-50-8	Copper	ppm	1000000.00	

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Part ID	Description		# of Units	Part Mass %
Capacitor 7	Capacitor		52	0.039

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
Dielectric		mg	0.394		12047-27-7	Barium Titanate	ppm	982233.50	
						Other Ceramic	ppm	17766.50	
Electro-Plating(Ni)		mg	0.012	00031	7440-02-0	Nickel	ppm	1000000.00	
Electro-Plating(Sn)		mg	0.012		7440-31-5	Tin	ppm	1000000.00	
Inner Electrode		mg	0.105	00031	7440-02-0	Nickel	ppm	1000000.00	
Terminal Electrode		mg	0.072		7440-50-8	Copper	ppm	986111.11	
						Glass ingredient	ppm	13888.89	

Part ID	Description		# of Units	Part Mass %
Die 1	Die		4	0.23

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
Die Silicon Material (Generic)		massPercent	100.000	00193	143907-02-2	Poly(oxy-1,2-ethanediyl), α,α',α'',α'''-(oxydi-3,1,2-	ppm	14.00	
						Proprietary Doped Silicon	ppm	999986.00	

Part ID	Description		# of Units	Part Mass %
Die 3	Die		2	0.18

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
Die Silicon Material (Generic)		massPercent	100.000			Proprietary Doped Silicon	ppm	1000000.00	

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Part ID	Description		# of Units	Part Mass %
Die 8	Die		1	0.074

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
Die Silicon Material (Generic)		massPercent	100.000			Proprietary Doped Silicon	ppm	1000000.00	

Part ID	Description		# of Units	Part Mass %
Die 9	Die		2	0.48

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
Die Silicon Material (Generic)		massPercent	100.000			Proprietary Doped Silicon	ppm	1000000.00	

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Part ID	Description		# of Units	Part Mass %
Die 10	Die		2	0.18

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
Die Silicon Material (Generic)		massPercent	100.000			Proprietary Doped Silicon	ppm	1000000.00	

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Part ID	Description		# of Units	Part Mass %
Die 11	Die		3	0.30

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
Die Silicon Material (Generic)		massPercent	100.000			Proprietary Doped Silicon	ppm	1000000.00	

Part ID	Description		# of Units	Part Mass %
Die 14	Die		1	1.57

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
Die Silicon Material (Generic)		massPercent	100.000			Proprietary Doped Silicon	ppm	1000000.00	

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Part ID	Description		# of Units	Part Mass %
Die 15	Die		1	0.24

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
Die Silicon Material (Generic)		massPercent	100.000			Proprietary Doped Silicon	ppm	1000000.00	

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Part ID	Description	# of Units	Part Mass %
MEMORY_PACKAGE	MEMORY_PACKAGE	1	0.22

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
ADHESIVE		g	0.009			Acrylic Polymer	ppm	49999.97	
						Additives	ppm	49999.97	
						Epoxy Resin	ppm	450000.084	
						Hardener	ppm	49999.97	
					7631-86-9	Silicon Dioxide	ppm	400000.00	
CHIP		g	0.162		7440-50-8	Copper	ppm	4436.42	
				00031	7440-02-0	Nickel	ppm	3819.55	
					7440-21-3	Silicon	ppm	981524.38	
					7631-86-9	Silicon Dioxide	ppm	31.16	
					7440-22-4	silver	ppm	128.78	
					7440-31-5	Tin	ppm	10059.70	
EMC		g	0.009		25068-38-6	(CHLOROMETHYL)OXIRANE, 4,4'-(1-	ppm	4999.90	
					27610-48-6	6-glycidyloxynapht-1-yl oxymethyloxirane	ppm	4999.90	
						Epoxy Resin	ppm	89999.96	
						SiO2 Filler	ppm	900000.25	

Part ID	Description		# of Units	Part Mass %
SEALANT	SEALANT		1	0.63

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
Proprietary, Other		mg	502.000			Proprietary Other	ppm	1000000.00	

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Part ID	Description		# of Units	Part Mass %
Solder Spheres	Solder Spheres		1	4.0066

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
SPARKLE BALL S #7097 0.56mm		mg	3214.800		7440-50-8	Copper	ppm	4970.76	
					7440-22-4	silver	ppm	40058.48	
					7440-31-5	Tin	ppm	954970.76	

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Part ID	Description	# of Units	Part Mass %
SOLDER_PREFORMS 12	SOLDER_PREFORMS	1	0.42

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
ECO SOLDER PELLET S L32 12x10.5x0.356 E		g	0.335		7440-74-6	Indium	ppm	940000.00	
					7440-22-4	Silver	ppm	60000.00	

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Part ID	Description	# of Units	Part Mass %
SOLDER_PREFORMS 13	SOLDER_PREFORMS	1	3.027

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
ECO SOLDER PELLET S L32 34.95x29.68x0.356 E-V1		g	2.429		7440-74-6	Indium	ppm	940000.00	
					7440-22-4	Silver	ppm	60000.00	

Part ID	Description		# of Units	Part Mass %
SOLDER-PASTE	SOLDER-PASTE		1	0.012

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
Alpha-Terpineol		mg	0.110		98-55-5	3-Cyclohexene-1-methanol, .alpha.,.alpha.,4-trimethyl-	ppm	1000000.00	
Copper		mg	0.045		7440-50-8	Copper	ppm	1000000.00	
Organic acid		mg	0.088		110-99-6	Acid	ppm	1000000.00	
Organic amine		mg	0.191		65605-36-9	Poly oxy ethylene diam	ppm	1000000.00	
Organic amine 2		mg	0.105		25214-63-5	1,2-Ethanediamine, polymer with 2-methyloxirane	ppm	1000000.00	
Polymer		mg	0.132		25322-68-3	Polyethylene glycol	ppm	1000000.00	
Silver		mg	0.089		7440-22-4	silver	ppm	1000000.00	
Solvent		mg	0.143		1559-36-0	Diethylene glycol-2-ether	ppm	1000000.00	
Solvent 2		mg	0.099		122-99-6	2-phenoxyethanol	ppm	1000000.00	
Surfactant		mg	0.160		26635-93-8	Polyoxyrthylene Alkylamine	ppm	1000000.00	
Surfactant 2		mg	0.072		1338-39-2	Sorbitan, monododecanoate	ppm	1000000.00	
Tin		mg	8.766		7440-31-5	Tin	ppm	1000000.00	

Part ID	Description		# of Units	Part Mass %
Substrate	Substrate		1	19.34

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
Electrical Connection		mg	78.510			FLI electrical Connection (Less Pb and Ni)	ppm	836963.44	
				00031	7440-02-0	Nickel	ppm	163036.56	
Package Substrate		mg	15352.120		7440-50-8	Copper	ppm	420012.35	
					65997-17-3	Fibrous-Glass-Wool	ppm	58270.78	
						Inorganic Fillers	ppm	371303.77	
						Overall Organic resin content	ppm	149312.93	
					7440-21-3	Silicon	ppm	977.72	
						SiNx	ppm	122.46	
Second Level Electrical Connection		mg	87.790		7440-36-0	Antimony (metallic)	ppm	15719.33	
				00031	7440-02-0	Nickel	ppm	668185.44	
						SLI Solder Electrical Connection (Less Sb and Ni)	ppm	316095.23	

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Part ID	Description		# of Units	Part Mass %
Thermal Plate	Thermal Plate		1	68.88

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
Stamped IHS		mg	55270.000		7440-50-8	Copper	ppm	999601.95	
				00031	7440-02-0	Nickel	ppm	398.046	

Part ID	Description		# of Units	Part Mass %
Underfill	Underfill		1	0.025

Homogenous Material Name	Material Class ID	HM Mass UoM	HM Mass Value	Substance Group	Substance Identity	Substance	Substance Mass UoM	Substance Mass Value	Exemption
UNDERFILL (CAS# 63148-56-1)		mg	20.000		27610-48-6	6-glycidyloxynapht-1-yl oxymethyloxirane	ppm	36000.00	
						Additives	ppm	15950.00	
						Amine type hardener	ppm	85000.00	
					9003-36-5	FORMALDEHYDE, POLYMER WITH (CHLOROMETHYL)OXIRANE	ppm	190000.00	
					60676-86-0	Silica, Vitreous	ppm	673000.00	
				00193	63148-56-1	Siloxanes and Silicones, Me 3,3,3-trifluoropropyl	ppm	50.00	