IPC ASSOCIATION CONNECTING ELECTRONICS INDUSTRIES®	**Material Composition Declaration** 	This document is a declaration of the substances within the manufacturer listed item. Note: if the item is an assembly with lower level parts, the declaration encompasses all lower level materials for which the manufacturer has engineering responsibility.

1752-21.1	IPC Web Site for Information on IPC-1752 Standard **http://www.ipc.org/IPC-175x**	Form Type * Distribute	Declaration Class * Class 6 - RoHS Yes/No, Homogeneous Materials and Mfg Information

Supplier Information

Company name* **onsemi**	Company unique ID	Unique ID Authority	**Response Date*** **2024-05-03**
Contact Name **Product-Env-Stewards**	Title - Contact Product Enviro Compliance	**Phone - Contact*** **NA**	**Email - Contact*** **Product-Env-Stewards@onsemi.com**
Authorized Representative* **Product-Env-Stewards**	Title - Representative Product Enviro Compliance	**Phone - Representative*** **NA**	**Email - Representative*** **Product-Env-Stewards@onsemi.com**

	Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	Weight*	UOM	Unit Type
		AR0144ATSM20XUEA0-DRBR	1MP 1/4 CIS SO	2024-05-03		TA1	106.72	mg	Each

Manufacturing Proccess Information

	Terminal Plating / Grid Array Material	Terminal Base Alloy	J-STD-020 MSL Rating	Peak Process Body Temperature		Max Time at Peak Temperature		Number of Reflow Cycles
	SnAgCu	**CU Alloy**	**3**	**260**	C	**30**	seconds	**3**

Comments

ATTENTION: MSL 3 Rated item requires Bake and Dry Pack (after electrical test)

For more information regarding material composition please refer to page 3

RoHS Material Composition Declaration		**Declaration Type ***	**Detailed**
Directive 2015/863/EU amending RoHS Directive 2011/65/EU	RoHS Definition: Quantity limit of 0.01% by mass (100 PPM) in homogeneous material for Cadmium and quantity limit of 0.1% by mass (1000 PPM) in homogeneous material for: Lead (Pb), Mercury (Hg), Hexavalent Chromium (Cr6+), Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE), and Bis(2-ethylhexyl) phthalate (DEHP), Benzyl-butyl phthalate (BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate (DIBP).		
Please indicate whether any homogeneous material (as defined by the RoHS Directive, EU 2011/65/EU and implemented by the laws of the European Union member states) of the part identified on this form contains lead, mercury, cadmium, hexavalentchromium, polybrominated biphenyls and/or polybrominated diphenyl ethers (each a “RoHS restricted substance”) in excess of the applicable quantity limit identified above. If a homogeneous material within the part contains a RoHS restricted substance inexcess of an applicable quantity limit, please indicate below which, if any, RoHS exemption you believe may apply. If the part is an assembly with lower level components, the declaration shall encompass all such components.Supplier certifies that it gathered the information it provides in this form using appropriate methods to ensure its accuracy and that such information is true and correct to the best of its knowledge and belief, as of the date that Supplier completes this form.Supplier acknowledges that Company will rely on this certification in determining the compliance of its products with European Union member state laws that implement the RoHS Directive. Company acknowledges that Supplier may have relied on informationprovided by others in completing this form, and that Supplier may not have independently verified such information. However, in situations where Supplier has not independently verified information provided by others, Supplier agrees that, at a minimum, itssuppliers have provided certifications regarding their contributions to the part, and those certifications are at least as comprehensive as the certification in this paragraph.If the Company and the Supplier enter into a written agreement with respect to the identified part,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 exclusivesource of the Supplier’s liability and the Company’s remedies for issues that arise regarding information the Supplier provides in this form. In the absence of such written agreement, the warranty rights and/or remedies of Supplier's Standard Terms andConditions of Sale applicable to such part shall apply.			
RoHS Declaration *	1 - Item(s) does not contain RoHS restricted substances per the definition above	**Supplier Acceptance ***	**Accepted**
Exemption: If the declared item does not contain RoHS restricted substances per the definition above except for defined RoHS exemptions, then select the corresponding response in the RoHS Declaration above and choose all applicable exemptions.			
Exemption List Version	EL-2011/534/EU		
Declaration Signature			
Instructions: Complete all of the required fields on all pages of this form. Select the "Accepted" on the Supplier Acceptance drop-down. This will display the signature area. Digitally sign the declaration (if required by the Requester) and click on Submit Form to have the form returned to the Requester.			
Supplier Digital Signature	**Rastislav Drska**		

Homogeneous Material Composition Declaration for Electronic Products

SubItem Instructions: The presence of any JIG Level A or B substances must be declared. [1] indicate the subpart in which the substance is located, [2] provide a description of the homogeneous material [3], enter the weight of the homogeneous material.

Substance Instructions: [A] select the Level (JIG A, JIG B, Requester or Supplier) [B] select the substance category (JIG or Requester) or enter a value (Supplier). [C] select the substance (JIG) or enter the substance and CAS (Other). [D] select a RoHS exemption, if applicable [E] enter the weight of the substance or the PPM concentration [F] Optionally enter the positive (+) and negative (-) tolerance in percent (Note: percent tolerance values are expected to cover a 3 sigma range of distribution unless otherwise noted).

Homogeneous Material	Weight	Unit of Measure	Level	Substance	CAS	Exempt	Weight	Unit of Measure
Die	16.35	mg		Misc.	proprietary data		0.0621	mg
			Supplier	Silicon (Si)	7440-21-3		16.126	mg
			Supplier	Aluminum (Al)	7429-90-5		0.1619	mg
Die Attach	1.35	mg		Bismaleimide Monomer	proprietary data		0.5197	mg
			Supplier	POLY(ETHYLENE GLYCOL) PHENYL ETHER ACRYLATE	56641-05-5		0.0068	mg
			Supplier	2,2-Bis(4-hydroxyphenyl)propane-epichlorohydrin copolymer acrylate	55818-57-0		0.135	mg
			Supplier	Bis(4-tert-butylcyclohexyl) peroxydicarbonate	15520-11-3		0.0068	mg
			Supplier	2,2-dimethyl-1,3-propanediyl dimethacrylate	1985-51-9		0.135	mg
			Supplier	2-phenoxy ethyl acrylate	48145-04-6		0.135	mg
			Supplier	Bisphenol A_Epichlorohydrin Polymer	25068-38-6		0.0068	mg
			Supplier	Other Additive Agents	Proprietary Data		0.27	mg
			Supplier	Formaldehyde Polymer	9003-36-5		0.135	mg
Epoxy	1.03	mg	Supplier	Imidazole Addition	68490-66-4		0.309	mg
			Supplier	Bisphenol A_Epichlorohydrin Polymer	25068-38-6		0.103	mg
			Supplier	Zirconium Dioxide (ZrO2)	1314-23-4		0.103	mg
			Supplier	Silica Amorphous (SiO2)	7631-86-9		0.103	mg
			Supplier	Formaldehyde Polymer	9003-36-5		0.412	mg
Imaging Lens	8.8	mg	Supplier	Titanium Dioxide (TiO2)	13463-67-7		0.44	mg
			Supplier	Sodium Monoxide (Na2O)	1313-59-3		0.44	mg
			Supplier	Boron Trioxide (B2O3)	1303-86-2		0.44	mg
			Supplier	Zinc Monoxide (ZnO)	1314-13-2		0.44	mg
			B	Antimony Trioxide (Sb2O3)	1309-64-4		0.044	mg
			Supplier	Aluminum Trioxide (Al2O3)	1344-28-1		0.44	mg
			Supplier	Potassium Monoxide (K2O)	12136-45-7		0.44	mg
			Supplier	Silica Crystalline (SiO2)	14808-60-7		6.116	mg
Mold Compound	31.06	mg		Epoxy resin	proprietary data		7.7029	mg
			Supplier	Other Additive Agents	Proprietary Data		0.9939	mg
			Supplier	Silica Amorphous (SiO2)	7631-86-9		3.106	mg
			Supplier	Fused Silica (SiO2)	60676-86-0		18.3254	mg

			Supplier	Silica Crystalline (SiO2)	14808-60-7		0.9318	mg
Solder Ball	30.04	mg	Supplier	Silver (Ag)	7440-22-4		0.9012	mg
			Supplier	Tin (Sn)	7440-31-5		28.9886	mg
			Supplier	Copper (Cu)	7440-50-8		0.1502	mg
Solder Mask	1.92	mg		Epoxy resin	proprietary data		0.2304	mg
			Supplier	Acrylate	Proprietary Data		0.7334	mg
			Supplier	Talc	14807-96-6		0.0518	mg
			Supplier	Miscellaneous	Trade Secret		0.071	mg
			Supplier	Barium Sulfate (BaSO4)	7727-43-7		0.8333	mg
Substrate Copper Foil	1.47	mg	Supplier	Copper (Cu)	7440-50-8		1.47	mg
Substrate - Core Material	7.32	mg		Epoxy resin	proprietary data		4.2456	mg
			Supplier	Fiber Glass (SiO2)	65997-17-3		3.0744	mg
Substrate Plating-Au	0.17	mg	Supplier	Gold (Au)	7440-57-5		0.17	mg
Substrate Plating-Cu	6.6	mg	Supplier	Copper (Cu)	7440-50-8		6.6	mg
Substrate Plating-Ni	0.3	mg	B	Nickel (Ni)	7440-02-0		0.3	mg
Wire Bond - Au	0.31	mg	Supplier	Gold (Au)	7440-57-5		0.31	mg