

## Material Declaration Data Sheet

**Customer** : Nordic  
**Device** : nRF52840-CKAA  
**Wafer Drawing #** : D003540  
**Drawing Rev** : B  
**Unit Drawing #** : D003539  
**Drawing Rev** : B

Material	Purpose	Substance Composition	CAS Number	Weight by mg	% weight of substance per Homogenous material	PPM	% weight of substance per package
Polybenzoxazole1	Dielectric	Proprietary	-----	0.096	100.00%	7365	0.74%
Polybenzoxazole2	Dielectric	Proprietary	-----	0.087	100.00%	6719	0.67%
RDL Seed Layer	Seed Layer	Ti	7440-32-6	0.001	3.93%	39	0.00%
	Seed Layer	W	7440-33-7	0.005	35.40%	353	0.04%
	Seed Layer	Cu	7440-50-8	0.008	60.67%	606	0.06%
Copper	Interconnect	Cu	7440-50-8	0.157	100.00%	12111	1.21%
UBM Seed Layer	Seed Layer	Ti	7440-32-6	0.000	3.93%	21	0.00%
	Seed Layer	W	7440-33-7	0.002	35.40%	192	0.02%
	Seed Layer	Cu	7440-50-8	0.004	60.67%	329	0.03%
Copper	UBM	Cu	7440-50-8	0.192	100.00%	14817	1.48%
Solder Ball	Interconnect	Sn	7440-31-5	2.783	95.50%	214485	21.45%
	Interconnect	Ag	7440-22-4	0.117	4.00%	8984	0.90%
	Interconnect	Cu	7440-50-8	0.015	0.50%	1123	0.11%
Die	Circuit	Si	7440-21-3	9.044	100.00%	697035	69.70%
Top Surface Laminate	Mark Surface	Proprietary	-----	0.465	100.00%	35820	3.58%
<b>Package Weight (mg):</b>				<b>12.975</b>	<b>% Total:</b>		<b>100.0%</b>

**Disclaimer:**

*Nepes hayyim believes this information to be correct, but cannot guarantee its completeness or accuracy. The information is based on data received from sources outside our company.*

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<b>Revision</b>	<b>Initiator</b>	<b>Description of Change</b>
A	ROGJ	Initial release