



MODEL 575 SERIES OSCILLATOR

MATERIAL CONTENT DECLARATION REPORT

CTS Electronic Components follows the Joint Industry Guidelines (JIG) industry consortia recommendations as defined in controlling document JIG-101 for “Green Compliance” Level A and Level B material content restrictions and standardized reporting.


RoHS COMPLIANT YES
 RoHS EXEMPTIONS NO

Level A – Restricted Material/Substance	Material/Substance Category intentionally added or present (Y/N) above threshold level	If Yes, Material Substance Mass (g/PPM)	If Yes, Detailed Material Substance Information
Asbestos	N		
Azo colorants ¹	N		
Cadmium/Cadmium compounds ²	N		
Hexavalent Chromium / Hexavalent Chromium Compounds ²	N		
Lead / Lead Compounds ²	N		
Mercury / Mercury Compounds ²	N		
Ozone Depleting Substances (CFCs, HCFCs, HBFCs, carbon tetrachloride, etc)	N		
Polybrominated Biphenyls (PBBs) ²	N		
Polybrominated Diphenylethers (PBDEs) ²	N		
Polychlorinated Biphenyls (PCBs)	N		
Polychlorinated Naphthalenes (more than 3 chlorine atoms)	N		
Radioactive Substances	N		
Shortchain Chlorinated Paraffins	N		
Tributyl Tin (TBT) and Triphenyl Tin (TPT)	N		
Tributyl Tin Oxide (TBTO)	N		

(1) Applicable to products and subparts that may come into direct contact with human skin.
 (2) Reported substances per EU RoHS Directive 2002/95/EC.

Level B – Reported Material/Substance	Material/Substance Category intentionally added or present (Y/N) above threshold level	If Yes, Material Substance Mass (g/PPM)	If Yes, Detailed Material Substance Information
Antimony/Antimony Compounds	N		
Arsenic/Arsenic Compounds	N		
Beryllium/Beryllium Compounds	N		
Bismuth/ Bismuth Compounds	N		
Brominated Flame Retardants (other than PBBs or PBDEs)	N		
Nickel/Nickel Compounds (external applications only)	N		
Phthalates	N		
Selenium/Selenium Compounds	N		
Polyvinyl Chloride (PVC)	N		



ELEMENTAL ANALYSIS							
MODEL 575 SERIES OSCILLATOR		RoHS/Green Compliant (6/6)		WEIGHT (mg) 192.4100	MSL RATING 1	MAX REFLOW 260°C	
PRODUCT BREAKDOWN	MATERIAL	CAS NUMBER	WEIGHT OF BOM ITEM (g)	% BY WEIGHT (Comp. Item)	mg/UNIT	% BY WEIGHT OF UNIT	REMARKS/SOURCE OF INFORMATION
Package							
Ceramic Base	Al ₂ O ₃ (aluminium trioxide)	1344-28-1	0.083000	90.00%	74.7000	38.82%	
	SiO ₂ (silicon dioxide)	14808-60-7		6.00%	4.9800	2.59%	
	Cr ₂ O ₃ (chromium (III) trioxide)	1308-38-9		2.00%	1.6600	0.86%	
	Mo (molybdenum)	7439-98-7		2.00%	1.6600	0.86%	
				100.00%	83.0000		
Base Conductor	W (tungsten)	7440-33-7	0.000050	100.00%	0.0500	0.03%	
				100.00%	0.0500		
Conductor Plating	Ni (nickel) plate [Barrier]	7440-02-0	0.000050	93.30%	0.0467	0.02%	
	Au (gold) plate [Finish]	7440-57-5		6.70%	0.0034	0.00%	
				100.00%	0.0500		
PIN	Fe (iron) kovar	7439-89-6	0.000500	53.00%	0.2650	0.14%	
	Ni (nickel) Kovar	7440-02-0		29.00%	0.1450	0.08%	
	Co (cobalt) Kovar	7440-48-4		18.00%	0.0900	0.05%	
				100.00%	0.5000		
Solder	Sn (tin)	7440-31-5	0.00030000	96.50%	0.2895	0.15%	
	Ag (silver)	7440-22-4		3.00%	0.0090	0.00%	
	Cu (copper)	7440-50-8		0.50%	0.0015	0.00%	
				100.00%	0.3000		
Crystal							
Ceramic Base	Al ₂ O ₃ (aluminium trioxide)	1344-28-1	0.037100	91.43%	33.9205	17.63%	
	SiO ₂ (silicon dioxide)	14808-60-7		5.71%	2.1184	1.10%	
	Mo (molybdenum)	7439-98-7		2.86%	1.0611	0.55%	
				100.00%	37.1000		
Conductors	W (tungsten)	7440-33-7	0.00507210	73.15%	3.7102	1.93%	
	Ni (nickel) plate	7440-02-0		8.05%	0.4083	0.21%	
	Au (gold) plate	7440-57-5		18.80%	0.9536	0.50%	
				100.00%	5.0721		
Seal Ring	Fe (iron) kovar	7439-89-6	0.010828	53.00%	5.7388	2.98%	
	Ni (nickel) Kovar	7440-02-0		29.00%	3.1401	1.63%	
	Co (cobalt) Kovar	7440-48-4		17.00%	1.8407	0.96%	
	Au (gold) plate	7440-57-5		1.00%	0.1083	0.06%	
				100.00%	10.8279		
Crystal Blank	SiO ₂ (silicon dioxide)	14808-60-7	0.001250	100.00%	1.2500	0.65%	
				100.00%	1.2500		
Crystal Electrode	Ni (nickel) [baseplate]	7440-02-0	0.00000250	99.10%	0.0025	0.00%	
	Fe (iron) [baseplate]	7439-89-6		0.40%	0.0000	0.00%	
	Mn (manganese) [baseplate]	7439-96-5		0.30%	0.0000	0.00%	
	Cu (copper) [baseplate]	7440-50-8		0.20%	0.0000	0.00%	
					100.00%	0.0025	
	Au (gold) [finish plate]	7440-57-5	0.00024750	100.00%	0.2475	0.13%	
				100.00%	0.2475		
Blank Adhesive	C ₈ -C ₁₂ (Aromatic Hydrocarbons)	64742-94-5	0.001000	12.00%	0.1200	0.06%	
	Ag (silver)	7440-22-4		88.00%	0.8800	0.46%	
				100.00%	1.0000		
Metal Cover	Fe (iron) kovar	7439-89-6	0.012000	54.00%	6.4800	3.37%	
	Ni (nickel) Kovar	7440-02-0		29.00%	3.4800	1.81%	
	Co (cobalt) Kovar	7440-48-4		17.00%	2.0400	1.06%	
				100.00%	12.0000		
Sub-Assembly							
Silicon Die (IC)	Si (silicon)	7440-21-3	0.002000	100.00%	2.0000	1.04%	
				100.00%	2.0000		
Die Adhesive	Bisphenol A	80-05-7	0.032710	10.00%	3.2710	1.70%	
	Phthalic Anhydride	85-44-9		55.00%	17.9905	9.35%	
	C (carbon)	7440-44-0		10.00%	3.2710	1.70%	
	Cycloaliphatic Epoxy Resin			10.00%	3.2710	1.70%	
	Trade Secret 0105			15.00%	4.9065	2.55%	
				100.00%	32.7100		
Capacitor	Al ₂ O ₃ (aluminium trioxide)	1344-28-1	0.0013	83.00%	1.0790	0.56%	
	SiO ₂ (silicon dioxide)	14808-60-7		4.00%	0.0520	0.03%	
	Ba (barium)	7440-39-3		12.00%	0.1560	0.08%	
	Sn (tin)	7440-31-5		1.00%	0.0130	0.01%	
				100.00%	1.3000		
Solder	Sn (tin)	7440-31-5	0.005000	94.50%	4.7250	2.46%	
	Ag (silver)	7440-22-4		3.50%	0.1750	0.09%	
	Rosin			2.00%	0.1000	0.05%	
				100.00%	5.0000		
Totals:			0.192410		192.4100	100.00%	



MATERIALS COMBINED	CAS NUMBER	WEIGHT OF MATERIAL (mg)	% BY WEIGHT OF UNIT
Ag (silver)	7440-22-4	1.0640	0.55%
Al ₂ O ₃ (aluminium trioxide)	1344-28-1	109.6995	57.01%
Au (gold)	7440-57-5	1.3127	0.68%
Ba (barium)	7440-39-3	0.1560	0.08%
Bisphenol A	80-05-7	3.2710	1.70%
C (carbon)	7440-44-0	3.2710	1.70%
C ₈ -C ₁₂ (Aromatic Hydrocarbons)	64742-94-5	0.1200	0.06%
Co (cobalt)	7440-48-4	3.9707	2.06%
Cr ₂ O ₃ (chromium (III) trioxide)	1308-38-9	1.6600	0.86%
Cu (copper)	7440-50-8	0.0015	0.00%
Cycloaliphatic Epoxy Resin		3.2710	1.70%
Fe (iron)	7439-89-6	12.4838	6.49%
Mn (manganese)	7439-96-5	0.0000	0.00%
Mo (molybdenum)	7439-98-7	2.7211	1.41%
Ni (nickel)	7440-02-0	7.2225	3.75%
Phthalic Anhydride	85-44-9	17.9905	9.35%
Rosin		0.1000	0.05%
Si (silicon)	7440-21-3	2.0000	1.04%
SiO ₂ (silicon dioxide)	14808-60-7	8.4004	4.37%
Sn (tin)	7440-31-5	5.0275	2.61%
Trade Secret 0105		4.9065	2.55%
W (tungsten)	7440-33-7	3.7602	1.95%
		192.4100	100.00%