



## Surface Roughness Conversion:

### Introduction:

The table below shows comparisons of various surface roughness scales. The information contained in the table is based on the assumption that metal surfaces are being tested. Comparison values may vary by up to 25%.

Surface Roughness Conversion Chart							
Ra (micrometers)	Ra (microinches)	RMS	CLA (N)	Rt	N	Cut-off Length	
						inch	mm
0.025	1	1.1	1	0.3	1	0.003	0.08
0.05	2	2.2	2	0.5	2	0.01	0.25
0.1	4	4.4	4	0.8	3	0.01	0.25
0.2	8	8.8	8	1.2	4	0.01	0.25
0.4	16	17.6	16	2	5	0.01	0.25
0.8	32	32.5	32	4	6	0.03	0.8
1.6	63	64.3	63	8	7	0.03	0.8
3.2	125	137.5	125	13	8	0.1	2.5
6.3	250	275	250	25	9	0.1	2.5
12.5	500	550	500	50	10	0.1	2.5
25	1000	1100	1000	100	11	0.3	8.0
50	2000	2200	2000	200	12	0.3	8.0

Ra = Roughness Average in micrometers or microinches

RMS = Root Mean Square in microinches

CLA = Center Line Average in microinches

Rt = Roughness Total in microns

N = New ISO (grade) scale numbers

Cut-off Length = Length required for sample