



**Surface Roughness Testers**

Online source of digital, handheld surface roughness testers

**3D Surface Profilers**

Noncontact measurement & analysis, sub-nanometer vertical resolution.

**3D Surface Measurement**

Accurate non-contact measurement of surface finish and roughness

**Road Profilographs**

SSI offers precision road surface testing products.

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**SURFACE TEXTURE Examples**

ANSI B46.1 is used in USA (measurement units minch(micro.inch) )

ISO 1302:1992 which uses N numbers..These are not included in BS EN ISO 1302:2002

The Table below provide equivalent values for the Average Roughness Ra , the USA Values and the N numbers..

mm	0.025	0.05	0.1	0.2	0.4	0.8	1.6	3.2	6.3	12.5	25	50
minch	1	2	4	8	16	32	63	125	250	500	1000	2000
N-Grade	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11	N12
Finish	Ground Finishes					Smooth Turned		Medium Turned		Rough Machined		

Rules of Thumb for surface finish equivalent of N grade and Ra values

- Rough turned with visible toolmarks....N10 = 12.5mm (micro.m)
- Smooth machined surface....N8 = 3.2mm (micro.m)
- Static mating surfaces (or datums).... N7 = 1.6mm(micro.m)
- Bearing Surfaces.... N6 = 0.8mm (micro.m)
- Fine lapped surfaces.... N1 = 0.025mm (micro.m)

Sites Providing Information on surface Finish..

1. [Predev.com](#)...Precision Devices. Chart of Machining vs surface Texture
2. [iCrank](#)... A link to further information on Surface Texture
3. [Ultra Tecusa](#)... Notes on measurement of surfaces

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Last Updated 25/05/2005