

1. Composite Set No. 130

CODE 79/1300

This set was produced to meet the requirements of Planning Engineers, Works Managers, Designers, Inspectors, Draughtsmen, etc. The thirty Specimens covering six of the most important machining methods: Turning, Horizontal Milling, Vertical Milling, Grinding, Lapping and Reaming, are mounted in an attractive wallet with an instruction card.

Although covering such a large range, the size and weight of the set has been kept to a minimum, weighing only 140 grammes and it can easily be carried in the pocket. In order to use the Composite Set in conjunction with other Rubert Electro-Formed Roughness Scales, the same machining data has been applied when preparing the specimens. The Designer or Planning Engineer etc, may thus specify a value of roughness and machining method selected from the Composite Set and the machinist who possesses a Rubert Surface Roughness Scale appropriate to the machine he is using will find specimens not only of the same machining method and roughness values but also of the same surface texture.

The values of the specimens are in accordance with the recommendations of the relative BS and ISO

Specifications are quoted in micrometers (μm Ra) and micro-inches (μRa) (previously referred to as CLA) in the English version, but the set is also available with 'N' numbers and Rz values (for practical purposes the same as Rt). On the instruction card given with each set the depth of irregularities (Rt) has been quoted against each Ra value, from which it can be seen that the ratio Rt : Ra varies considerably (from 4 : 1 to 10 : 1) and this information is sometimes of great assistance.

2. Comparator Scales

(Nos. 115 to 136)

Covering every known conventional machining method and every obtainable value.

The Scales conform to BS1134 and the American Standard, as well as to the relative German DIN, the Swiss VSM Standards and the ISO Recommendations and being electro-formed in nickel they provide, in addition to the standardised numerical designations every other aspect of a texture which cannot be expressed in numerical terms but only discerned by visual comparison.

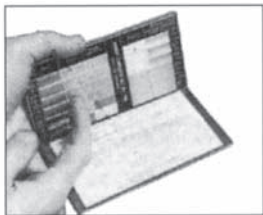
We are producing different Scales, each comprising from 5 to 8 Specimens. Most Scales are limited to one machining method so that a machine operator can be given that Scale which is related only to his own works and is not confused by scales representing other machining methods.

Each Scale is normally supplied in a leather wallet, but, if required, Sets of 6, 12, 18 or 20 Scales will be supplied in polished wooden boxes, whereby it is necessary to specify the Scales required.

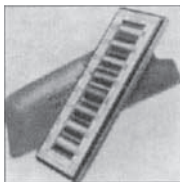
By consulting and quoting RUBERT Roughness Scales one can interpret and communicate ideas on surface quality throughout the World. They conform to BS1134, the American Standard, as well as the relative German DIN and Swiss VSM Standards and provide in addition to the standardised numerical designations, every other aspect of texture which cannot be expressed in numerical terms.

Code No.	Machining Method	Colour	Number of Specimens	Micro inches CLA	μm Ra	N Numbers
79/0115	Surface Grinding	BLACK	8	1-125	0.025-3.2	1-8
79/0116	Cylindrical Grinding	BLACK	8	1-125	0.025-3.2	1-8
79/0117	Flat Lapping	WHITE	8	1-8	0.025-0.2	1-4
	Criss-Cross Parallel		4	1-8	0.025-0.2	1-4
79/0118	Cylindrical Lapping	WHITE	8	1-8	0.025-0.2	1-4
	Superfinishing		4	1-8	0.025-0.2	1-4
79/0119	Face Turning (Flat)	YELLOW	8	16-2000	0.4-50.0	5-12
79/0120	Turning (Cyl)	YELLOW	8	16-2000	0.4-50.0	5-12
79/0121	End Milling	BROWN	8	16-2000	0.4-50.0	5-12
79/0122	Reaming	RED	8	16-125	0.4-3.2	5-8
	Drilling		4	63-500	1.6-12.5	7-10
79/0123	Horizontal Milling	BROWN	7	32-2000	0.8-50.0	6-12
79/0125	Shaping or Planing	RED	7	32-2000	0.8-50.0	6-12
79/0126	Linishing	GREY	6	4-125	0.1-3.2	3-8
79/0128	Vertical Grinding	BLACK	6	8-250	0.2-6.3	4-9
79/0129A	Grit Blasting	GREY	6	16-500	0.4-12.5	5-10
	Angular Particles					
79/0129B	Shot Blasting	GREY	6	16-500	0.4-12.5	5-10
	Circular Particles					
79/0131	Spark Erosion	GREEN	7	16-1000	0.4-25.0	5-11
79/0132	Hand Scraping		3			
79/0133	Hand Filing	DK. BLUE	5	16-250	0.4-6.3	5-9
79/0134	Casting	LT. GREEN	7	32-2000	0.8-50.0	6-12
79/0135	Honing	WHITE	6	2-63	0.5-1.6	2-7
79/0136	Polishing	WHITE	5	0.5-8	0.0125-0.2	0.4
79/1006	Set of 6 Scales (to be specified) in polished wooden case					
79/1012	Set of 12 Scales (to be specified) in polished wooden case					
79/1018	Set of 18 Scales (to be specified) in polished wooden case					
79/1020	Set of 20 Scales (to be specified) in polished wooden case					

* This Scale is the only one range from Nos. 115 to 136 which is not designated in terms of CLA nor any other geometrical parameter (Rp, Rt etc) according to the British Standard 1134 or the relevant DIN Specifications. The quality of a hand-scraped surface depends solely on the percentage bearing area and number of high spots. The actual depth of the irregularities is of little importance. We have selected three quality grades with indication of numbers of high spots per square inch and percentage bearing area.



Rubert Composite Set, containing 30 Specimens, each approx. 22mm x 10mm comprising:
 3 Specimens Flat Lapping
 0.05 to 0.2 μm (2 to 8 μRa) Ra
 3 Specimens Reaming
 0.4 to 1.6 μm (16 to 63 μRa) Ra
 6 Specimens Grinding
 0.05 to 1.6 μm (2 to 63 μRa) Ra
 6 Specimens Horizontal Milling
 0.4 to 12.5 μm (16 to 500 μRa) Ra
 6 Specimens Vertical Milling
 0.4 to 12.5 μm (16 to 500 μRa) Ra
 6 Specimens Turning
 0.4 to 12.5 μm (16 to 500 μRa) Ra
 fitted in an attractive wallet with instruction card.



Roughness scales to 150 8503 part 1 for GRIT and SHOT blasting. Each have four segments for identifying Fine, Medium or Coarse grades.

CODE
 79/1350 GRIT BLASTING
 79/1355 SHOT BLASTING
 Manufactured in the UK.

