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Temperaturmanagement Industriekomponenten Messtechnik HF-/Mikrowellentechnik Luftfahrtelektronik Entwicklung und Service

## Surface Replication Compound Kit

For specimens where access is difficult, the company recommends that Microset replicating compounds be used in conjunction with Optical Micrometers.

The following six points illustrate the main reasons why we recommend the use of this kit for scratch and pit measurement and analysis.

## • Many grades are offered instead of just one grade.

Microset offers 12 standard grades; four for aerospace and industrial and eight for nuclear. They offer custom compounds as well. (Cure times, viscosity, and color are the most common variables in that order.)

• An advanced delivery system is provided, not just "a stick and a scrap of cardboard". Microset offers delivery systems for industrial, not dental applications. The dispensing guns use custom mixing nozzles, with 32 instead of 24 "folds", because complete mixing is critical. Other products are mixed by hand with a "stick on piece of cardboard".

• **Microset represents itself as a strictly industrial, and not dental compound.** The phrase: "for replication of metal surfaces" is printed on Microset cartridges, and the website shows industrial applications ONLY; with no dental context or reference whatsoever.

• The U.S. Department of Energy (DOE) funded a study citing desirable properties of Microset. The Department of Energy (DOE) funded a study on engine wear and friction that featured the use of Microset to examine bearing surfaces. This report cites the ideal industrial replication characteristics of Microset compounds.

• Microset compounds are engineered to leave no harmful residues on specimens understudy. Some replication compounds contain harmful chemicals that can damage the specimen under study. Over the years, Microset has worked closely with the nuclear industry, and has removed undesirable elements and fillers. Some chemicals which are still present by necessity have been reduced to minimal or trace levels, as dictated by customer requirements.

• Microset has eliminated "clear surface layer" issues that can compromise accurate analysis. Microset compounds are designed for macro and micro (submicron) microscopic examination. As a result, they exhibit no clear or translucent surface layer. Products which do exhibit a clear layer effect are problematic because it is difficult to determine whether a microscope is focussed on the top or bottom of the ambiguous clear layer.









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P/N	Item Description
4400M	Surface Replication Kit
	For use with Model 8400 Optical Micrometer. Featuring engineering replication products. Kit
	includes:
	1 Carrying Case (4400-60)
	1 Dispensing Gun (4400-10)
	5 Replication Compounds (4400-2)
	5 Nozzle Packs (4400-30)
	1 Pack of Backing Slides (4400-40)
	2 Packs of Backing Paper (4400-50)
	1 Tilting Stage Base (4400-70)
	1 Optical Micrometer Base (8400-27)
4400 4	
4400-1	Dispensing Gun (50 ml)
	Microset P/N DG50.
4400 ODT	Hand operated, reusable tool for dispensing 50ml cartridges.
4400-2RT 4400-2RF	Replication Compound (Thixotropic)
	Microset P/N 101RT THIXO.
	General Purpose fast curing thixotropic material. Replication of vertical, overhead or horizontal surfaces. Use in low temperature conditions or where rapid results are required. Working life
	$(25^{\circ})$ is 30 seconds, curing time (25°) is 5 min.
	Guaranteed minimum shelf life is 6 months. BLACK or GREY.
	Replication Compound (Fluid)
	Microset P/N 101RF FLUID.
	General purpose fast curing fluid material. Used where rapid results are required. Ideal for
	microstructures and rough surfaces, particularly at low temperatures. Working life ( $25$ °C) is 30
	seconds, curing time (25°) is 5 min.
	Guaranteed minimum shelf life is 6 months. BLACK or GREY.
4400-3	Nozzle Pack (50 ml)
	Microset P/N NP50.
	Pack of 10. Used with Dispensing Gun to apply compound to surface.
4400-4	Backing Slides 60mm x 40mm
	Microset P/N BS50.
	Pack of 50. Bonds to Microset compound for inspection and measurement using a microscope.
4400-5	Backing Paper 105mm x 75mm
	Microset P/N BP105x75.
	Pack of 40. The Backing Paper bonds to Microset compounds and facilitates labelling and
	handling. The use of the paper is optional but will greatly assist microscopic inspection and
	measurement procedures.
4400-6	Carrying Case
	Safe and convenient for storing and transporting a complete Surface Replication Kit 4400M
	(holds contents are detailed above)
4400-7	Tilting Stage Base
	Microset P/N TS1.
	Designed for use with optical microsopes to facilitates the examination of replicas.
8400-27	Tall Tripod Base, 4.5" Dia.
	For use with Model 8400K Optical Micrometer and 4400-7 Tilting Stage Base.