

This guide provides information on how to use Imetrum Stamp Sets to apply a suitable pattern to test specimens.

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Stamp Set information and guidance

Contents

The specimen marking equipment is shown in figure 1 below. If undertaking tests at an elevated temperature, please request information on alternative inks from your equipment supplier.



Figure 1 - Specimen marking kit supplied with each Extensometer Module

Maintenance

Stamp pads should be stored face down with lids fitted. Stamps should be cleaned after use to prevent clogging and increase lifespan. A bottle of Cleaning Solution is included for this purpose.

Visibility and positioning

If the edge of your specimen will not be visible in the image you may wish to add additional marking to ensure good alignment of measurements with the specimen.

A pen mark in the centre of the specimen can help to position your measurement centrally.

Obtaining accurate measurements

The steps outlined below outline how best to use the Stamp to get the most accurate measurements.

1.1	Ensure the specimen to be marked is clean and free of grease.
1.2	<p>You should apply a white base coat to the specimen if:</p> <ul style="list-style-type: none"> • The specimen is reflective, for example most metals • The colour of the specimen will change during testing, for example a plastic under high strain. <p>To apply a white base coat:</p> <ol style="list-style-type: none"> 1. Pour a small amount of white ink onto the white ink pad. Spread it with the plastic wiper over an area the same width as your specimen as shown in the figure below. 2. Lightly press and wipe the specimen across the stamp pad. Ensure that the colour is applied evenly across the specimen, avoiding streaks. 3. Leave the ink until dry to the touch. This typically takes around one minute. 4. Replace the lid once finished to prevent the ink drying out.  <p>Figure 2 – White ink pad with ink partially spread</p>
1.3	Apply ink to the Stamp by dabbing the Stamp onto an ink pad of the appropriate colour. Use black ink for light coloured specimens or if you have applied a white base coat. Use white ink for dark specimens.
1.4	<p>Push the Stamp onto the specimen with a firm pressure.</p> <ul style="list-style-type: none"> • For flat specimens, press the Stamp onto the surface with an even pressure • If the Stamp is too long for the specimen, it can be turned sideways, which may require an application at each end of the gauge length • If the Stamp is too short for the specimen, separate applications at each end of the gauge length will be needed • If the Stamp is too narrow for a specimen, multiple applications will be needed if you wish to take measurements across the whole width.

	<ul style="list-style-type: none">• If the specimen is round, the specimen can be rolled across the surface of the Stamp. The handle of the Stamp can be removed to allow the Stamp to be placed upside down onto a flat surface to facilitate this.• If applying the Stamp multiple times to the specimen, take care not to overlap the different stamp patterns. The Stamp will need re-inking after applying it to a few specimens to prevent the speckles becoming inconsistent. <p>Replace the ink pad covers once finished to prevent the ink drying out. Wipe excess ink from the stamp with a cloth before it dries with the cleaning solution provided.</p>
1.5	Inspect the pattern on the specimen to ensure that the pattern is well defined in the areas to be measured. There should be no missing or smudged patterns. Poor patterns can be removed with the Cleaning Solution.
1.6	Wait one minute for the ink to dry and the ink surface to go matte before starting any video measurements. The specimen can be secured to the test frame during this time so long as contact is not made with the wet ink.
1.7	Insert a specimen into the test frame. Align and secure the specimen appropriately and apply any necessary pre-load.