

Vector U70 Specimen Marking



Vector measures strain or extension via markings applied to the specimen. There are three mark types: Rings, Filled Circles and Speckles. The mark type used depends on specimen geometry.



Flat > 4 mm



Speckle



Flat > 2 mm

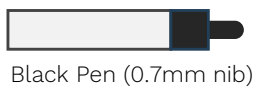
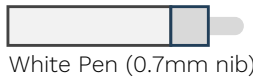


Round > 2.5 mm

Rings and Dots

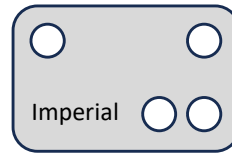
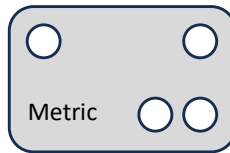
Kit

Pens

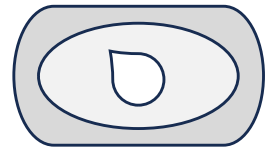


Black Pen (0.7mm nib)

Stencils



White Ink



Uses



Flat Specimen > 4 mm



or



=



White

Blue



or



=



Clear

Strain-Whitened

Basecoat



or



=



Dark

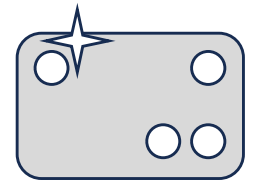
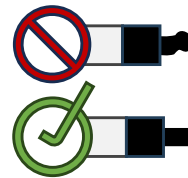
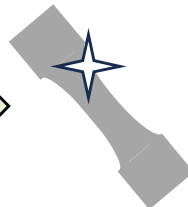
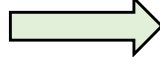
Metal

Prepare

Clean specimen to remove grease and dust:



Alcohol based cleaners

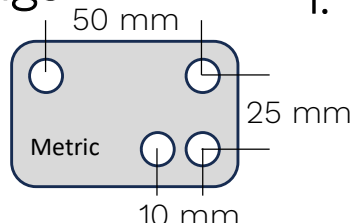


Do not touch reduced section of specimen once cleaned.

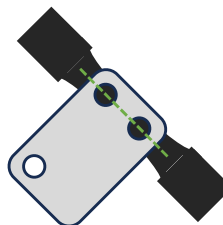
Apply Markings

$\epsilon < 250\%$ =

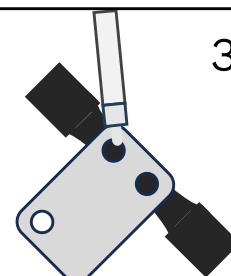
$\epsilon > 250\%$ =



1.



2.

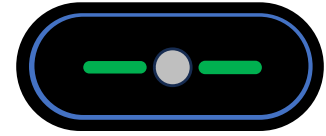


3.



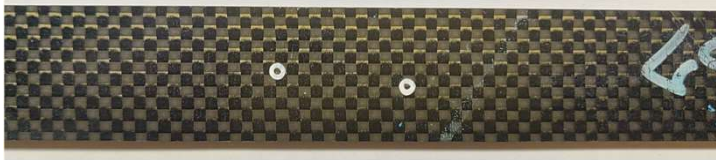
Rings and Dots

Good Examples



Status Measuring

Poor Examples

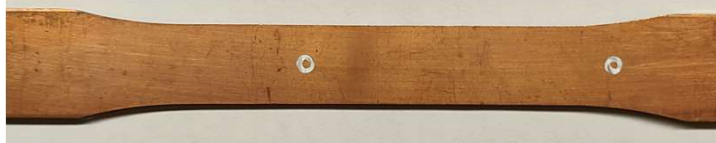


Issue

Misaligned

Possible Cause

- Stencil set off-centre from specimen.



Misplaced

- Stencil placed too close to shoulder or away from centre line.



Smudged

- Ink smudged when removing stencil.



Scratched

- Specimen poorly handled.



Irregular

- Marking applied by hand.



Mismatched

- Markings applied with kit intended for Vector U200.



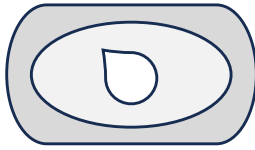
Ineffective

- Specimen not cleaned, or basecoat not applied before marking specimen.

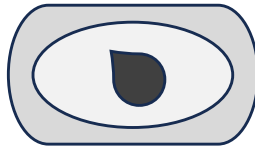
Speckles

Kit

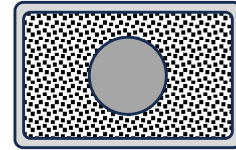
White Ink



Black Ink



Speckle Stamp



Uses



Round
> 2.5 mm

Flat
> 2 mm



White

or



Blue

=



Clear

or



Strain-Whitened

=



Basecoat



Dark

or



Metal

=



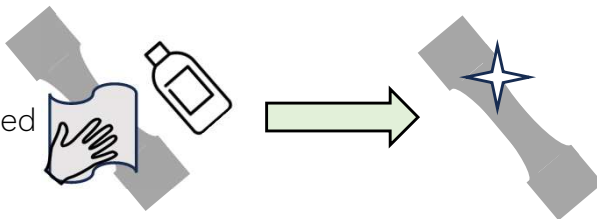
Basecoat

Prepare

Clean specimen to remove grease and dust:



Alcohol based
cleaners



Do not touch reduced section
of specimen once cleaned.

Clean and prepare equipment:



For new stamps:

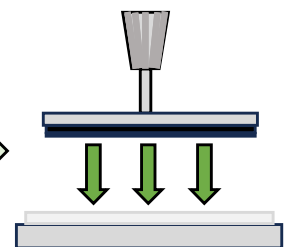
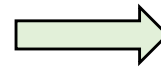
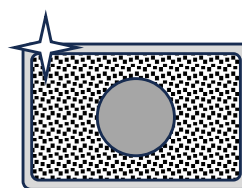
Clean and check that the stamp is **clean and grease free**. Then apply speckle marks onto scrap material several times to prime stamp for general use.



Acetone, oil-
based cleaners



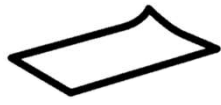
Compressed
air + Isopropyl
+ Micro
fibre cloth



Place stamp on top
of ink pad between
marking specimens.

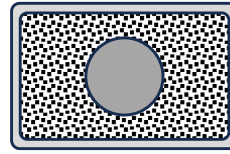
Apply Markings

1. Prepare work area



Place a clean sheet of paper under specimen before stamping.

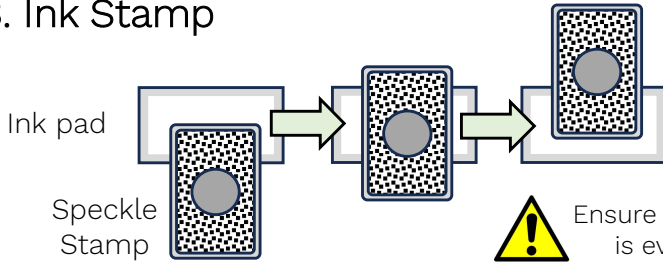
2. Select Gauge Length



10 mm GL

25 mm GL

3. Ink Stamp



Ensure that entire stamp pad is evenly coated in ink.

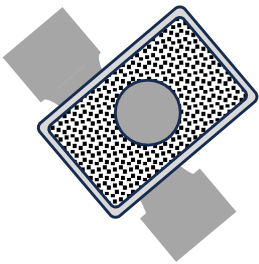


Light even pressure

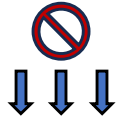


Heavy pressure


4. Apply stamp to specimen



Firm even pressure

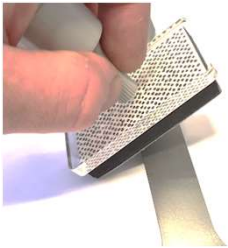


Light pressure

 Top tip: allowing for the ink to dry slightly on the stamp before applying will minimise the likelihood of slipping.

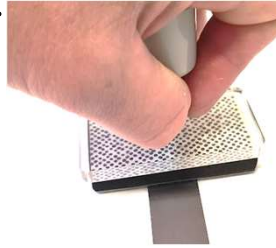
Technique for Flat Specimens:

1.



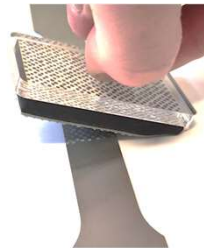
Roll on

2.

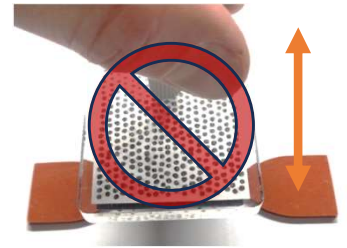


Press down

3.



Peel off



Do not re-stamp the same specimen twice

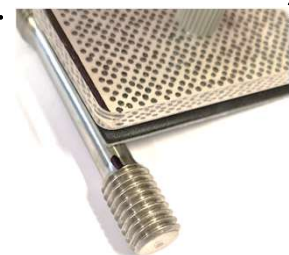
Technique for Round Specimens:

1.



Mark reference line on shoulder

2.

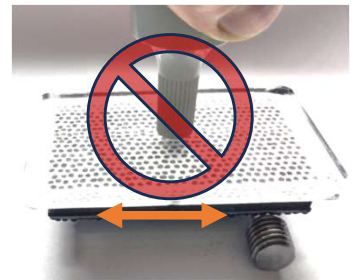


Apply stamp


3.



Press down and roll forwards one rotation.



Do not re-stamp the same specimen twice

 Top tip: A crisp 'peeling' sound when removing stamp from specimen is a good indicator that the speckle pattern has been applied effectively.

Speckles

Good Examples



Good speckle patterns consist of high contrast speckles, with evenly inked blots covering a large area of the specimen.

Poor Examples



Issue

Faint

Cause

- Too little ink, or not enough pressure during stamping.



Smudged

- Too much ink on stamp.



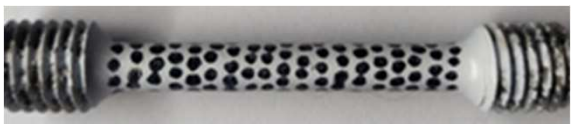
Patchy

- Uneven pressure during inking and/or marking stages.



Irregular

- Markings applied by hand.



Mismatched

- Markings applied with stamp intended for Vector U200.



Marked twice

- Markings applied twice on same specimen.



Ineffective

- Markings applied without basecoat.

