

## Dynamic Mechanical Analysis

SU8 specimens having dimensions  $2.5 \text{ mm} \times 25 \text{ mm} \times 55 \mu\text{m}$  were tested via dynamic mechanical analysis (DMA) using a TA Instruments DMA Q800 by loading them using a sinusoidal force amplitude with frequency of 1 Hz. Tension mode was used for the measurements. A pre-loading force of 0.001 N was applied to avoid initial buckling on the film. A temperature ramp of  $3^\circ\text{C}/\text{min}$  was used for the DMA measurements. Specimens that were exposed to a  $2 \text{ mW}/\text{cm}^2$  UV light for 40 sec, 60 sec, 80 sec, and 100 sec were used to study the effect of UV exposure time and temperature on the modulus of the material. Completely crosslinked strips were made by subjecting the sheet to 180 sec of UV exposure followed by an additional hard baking step. Hard baking was done at  $200^\circ\text{C}$  for 2 hours. DMA analyses were carried out on three SU8 samples of the same nominal size for each exposure energy. The raw data from the analyses are given in this document.

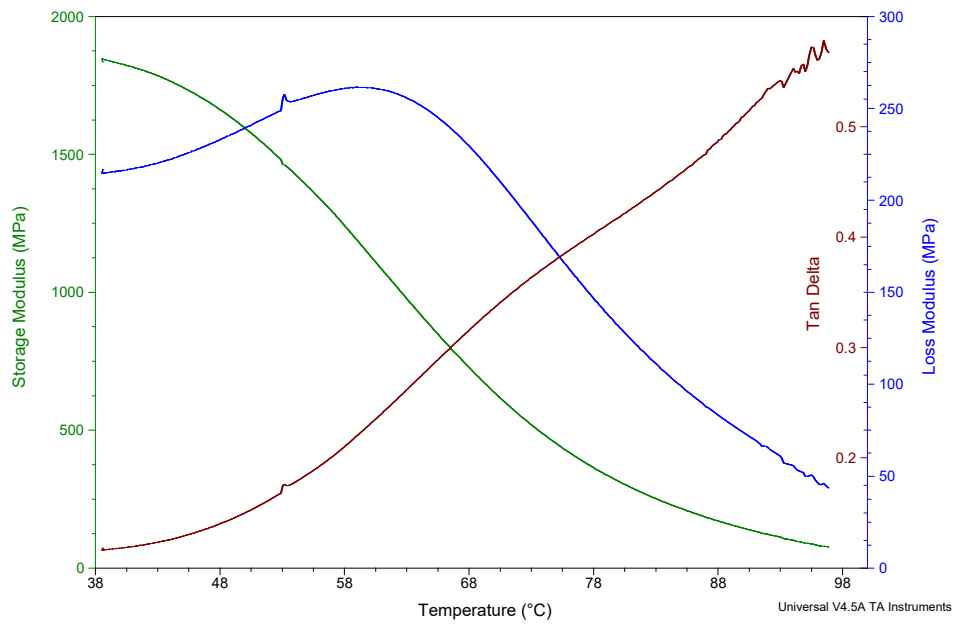


Fig. SB 1: Dynamic mechanical analysis results of a sheet made by exposing a SU8 film for 180 sec with a  $2 \text{ mW/cm}^2$  UV light source followed by an additional hard baking step. These results are associated with specimen 1 of this kind.

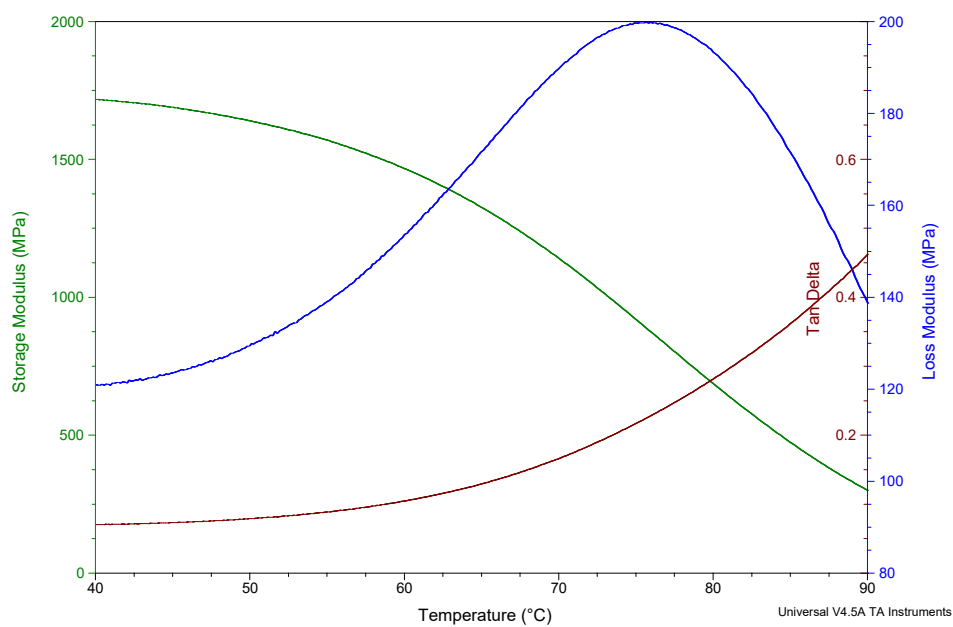


Fig. SB 2: Dynamic mechanical analysis results of a sheet made by exposing a SU8 film for 180 sec with a  $2 \text{ mW/cm}^2$  UV light source followed by an additional hard baking step. These results are associated with specimen 2 of this kind.

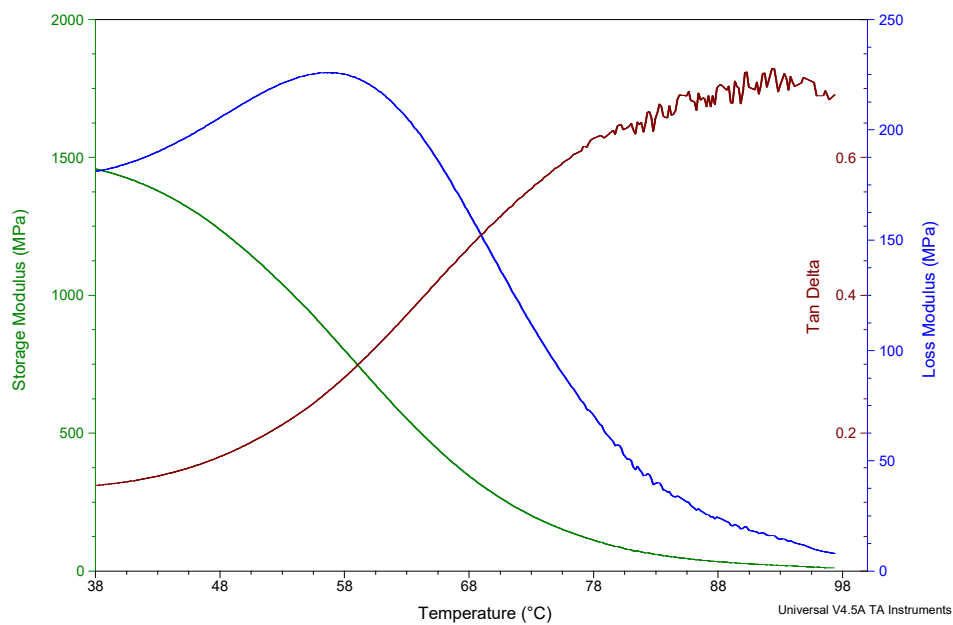


Fig. SB 3: Dynamic mechanical analysis results of a sheet made by exposing a SU8 film for 180 sec with a  $2 \text{ mW/cm}^2$  UV light source followed by an additional hard baking step. These results are associated with specimen 3 of this kind.

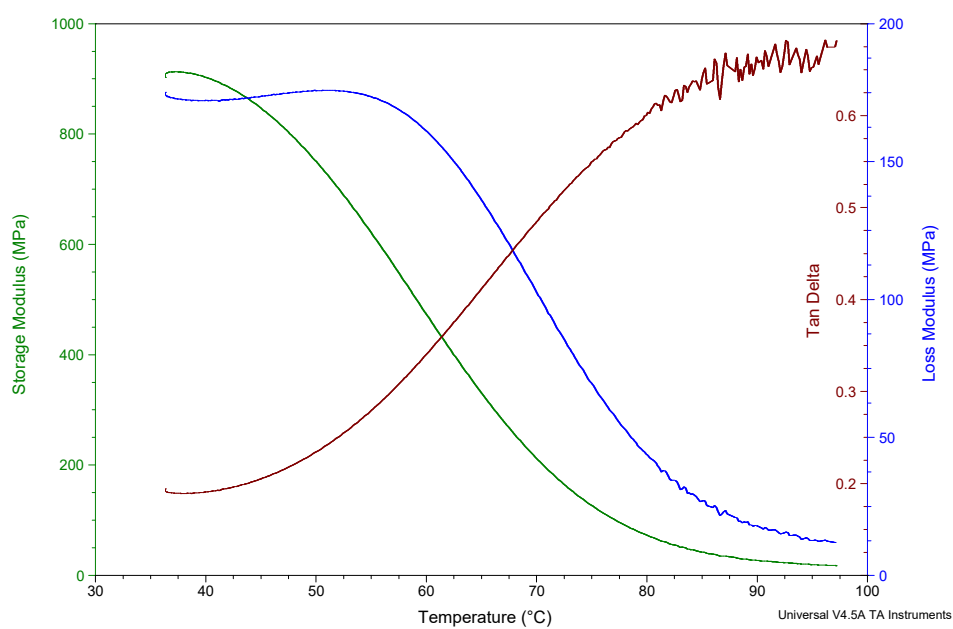


Fig. SB 4: Dynamic mechanical analysis results of a sheet made by exposing a SU8 film for 100 sec with a  $2 \text{ mW/cm}^2$  UV light source. These results are associated with specimen 1 of this kind.

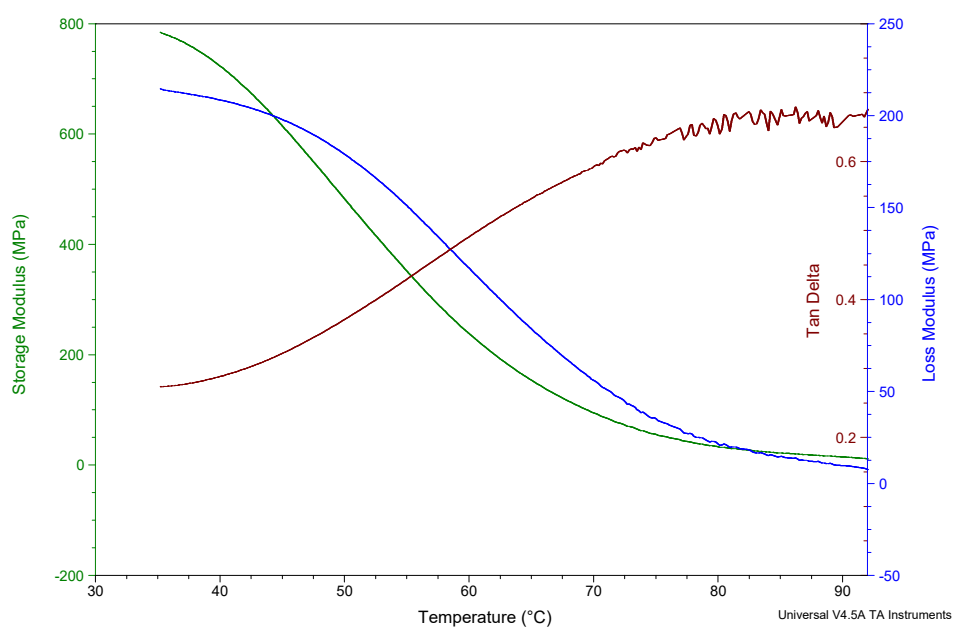


Fig. SB 5: Dynamic mechanical analysis results of a sheet made by exposing a SU8 film for 100 sec with a  $2 \text{ mW/cm}^2$  UV light source. These results are associated with specimen 2 of this kind.

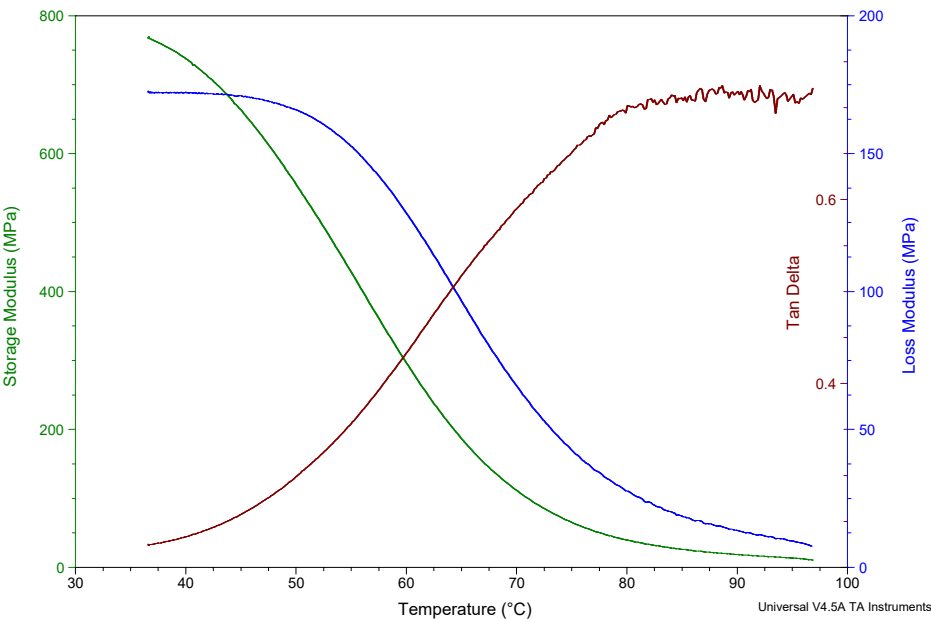


Fig. SB 6: Dynamic mechanical analysis results of a sheet made by exposing a SU8 film for 100 sec with a 2 mW/cm<sup>2</sup> UV light source. These results are associated with specimen 3 of this kind.

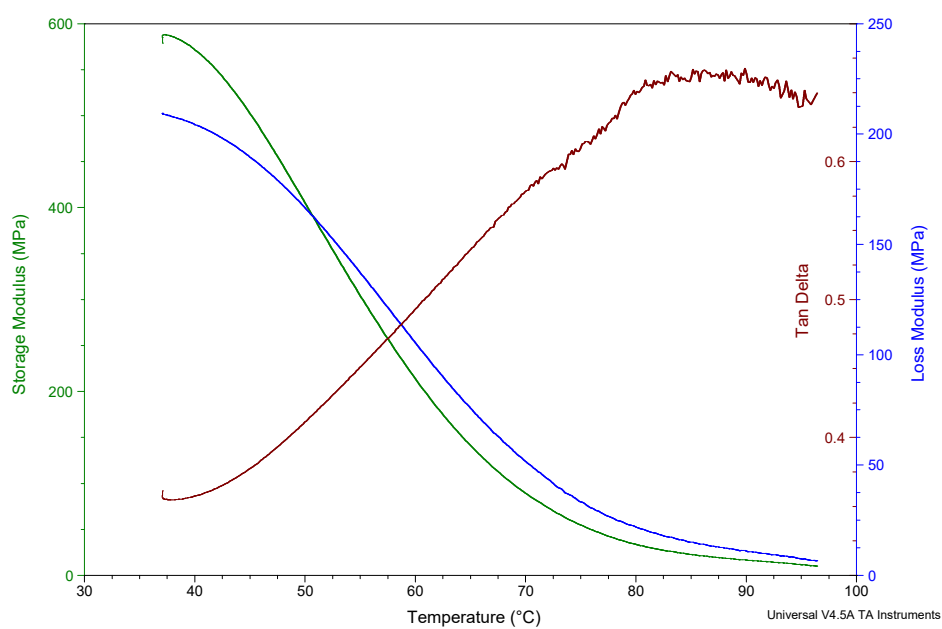


Fig. SB 7: Dynamic mechanical analysis results of a sheet made by exposing a SU8 film for 80 sec with a  $2 \text{ mW/cm}^2$  UV light source. These results are associated with specimen 1 of this kind.



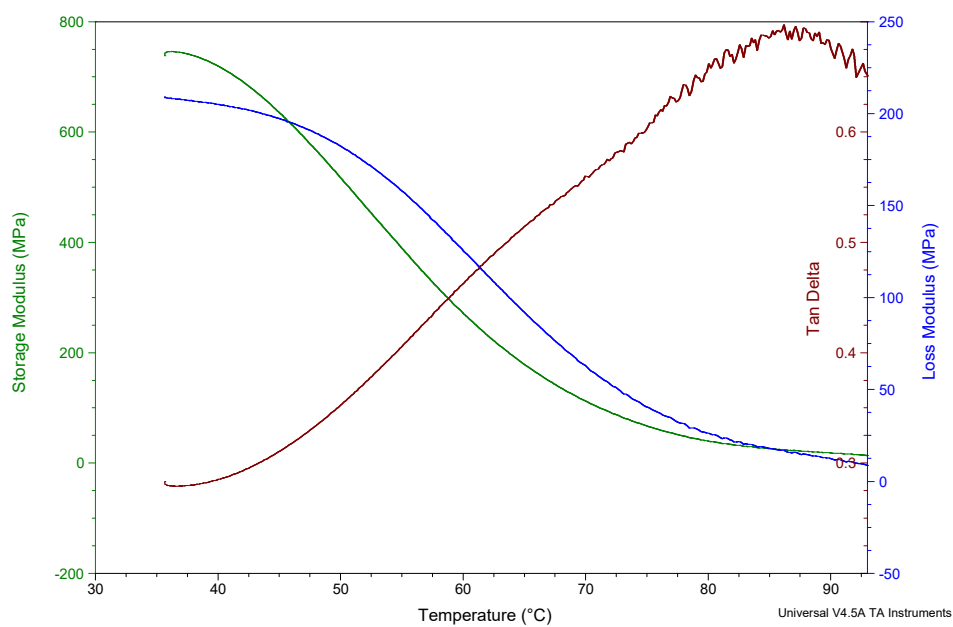


Fig. SB 8: Dynamic mechanical analysis results of a sheet made by exposing a SU8 film for 80 sec with a  $2 \text{ mW/cm}^2$  UV light source. These results are associated with specimen 2 of this kind.

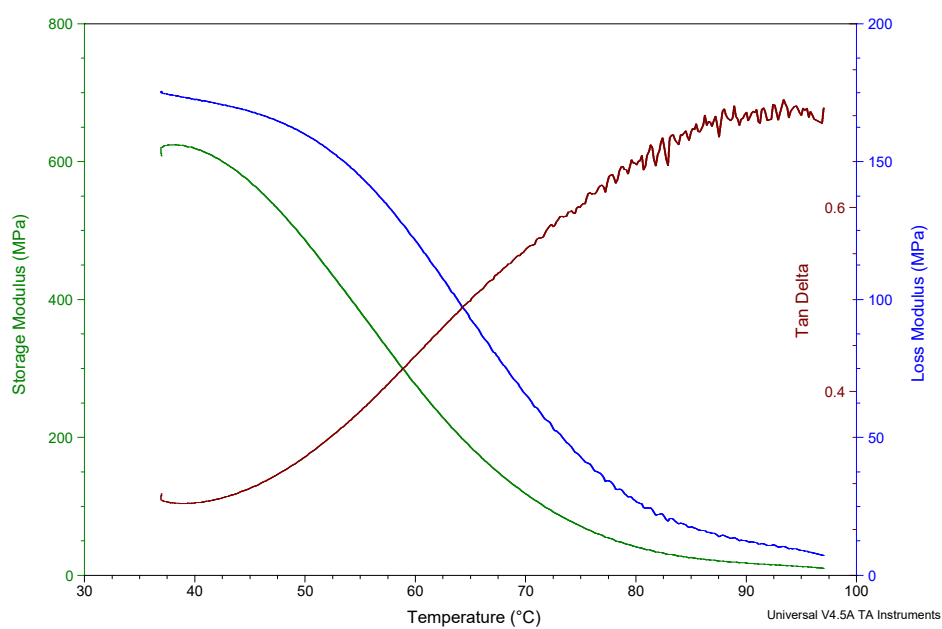


Fig. SB 9: Dynamic mechanical analysis results of a sheet made by exposing a SU8 film for 80 sec with a  $2 \text{ mW/cm}^2$  UV light source. These results are associated with specimen 3 of this kind.

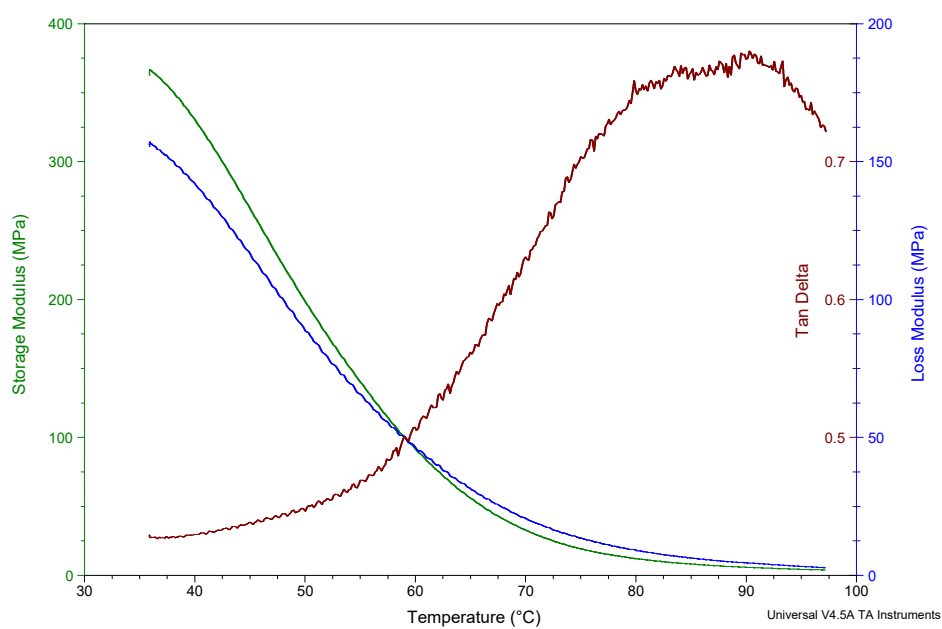


Fig. SB 10: Dynamic mechanical analysis results of a sheet made by exposing a SU8 film for 60 sec with a 2 mW/cm<sup>2</sup> UV light source. These results are associated with specimen 1 of this kind.

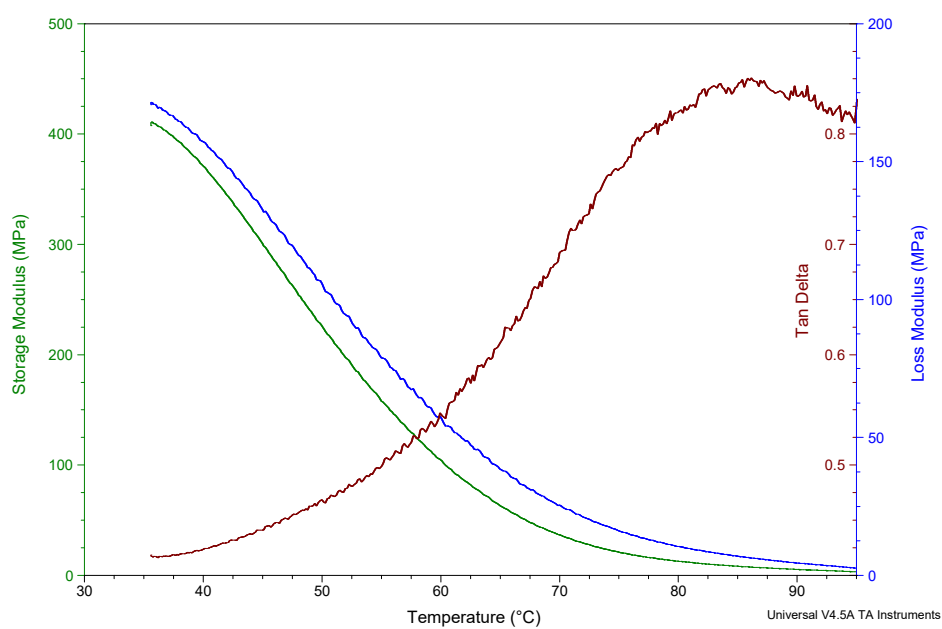


Fig. SB 11: Dynamic mechanical analysis results of a sheet made by exposing a SU8 film for 60 sec with a 2 mW/cm<sup>2</sup> UV light source. These results are associated with specimen 2 of this kind.

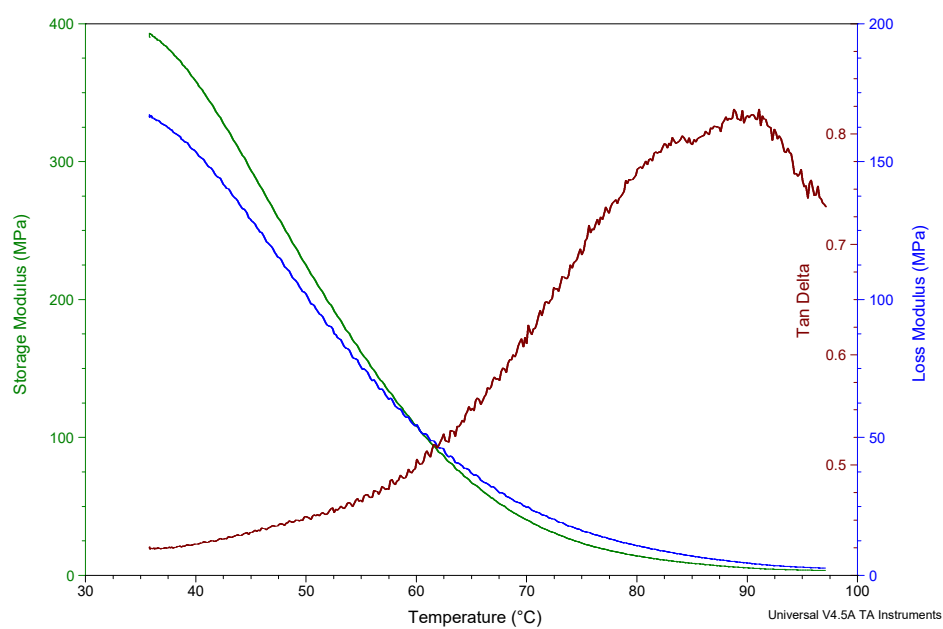


Fig. SB 12: Dynamic mechanical analysis results of a sheet made by exposing a SU8 film for 60 sec with a  $2 \text{ mW/cm}^2$  UV light source. These results are associated with specimen 3 of this kind.

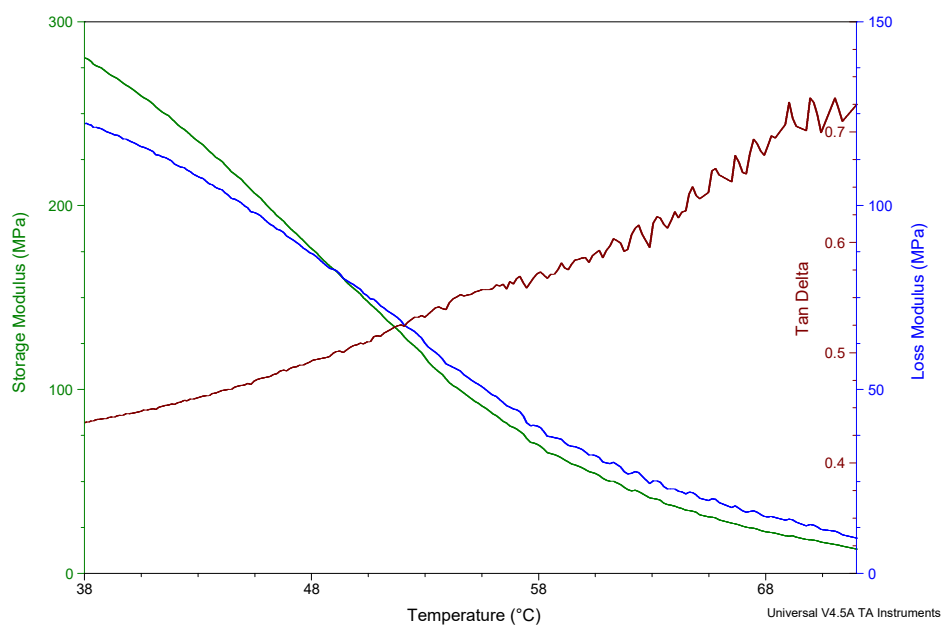


Fig. SB 13: Dynamic mechanical analysis results of a sheet made by exposing a SU8 film for 40 sec with a  $2 \text{ mW/cm}^2$  UV light source. These results are associated with specimen 1 of this kind.

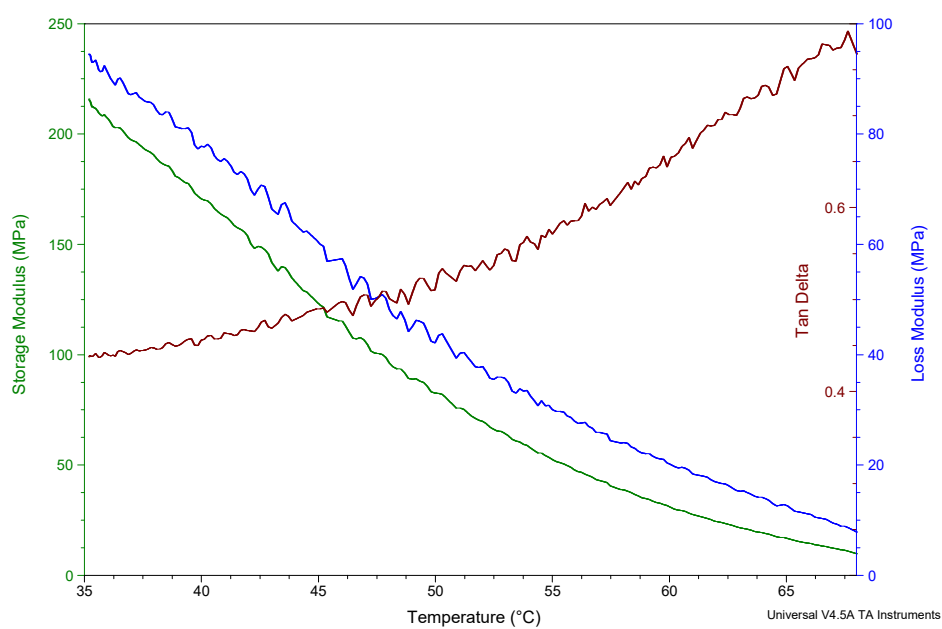


Fig. SB 14: Dynamic mechanical analysis results of a sheet made by exposing a SU8 film for 40 sec with a  $2 \text{ mW/cm}^2$  UV light source. These results are associated with specimen 2 of this kind.

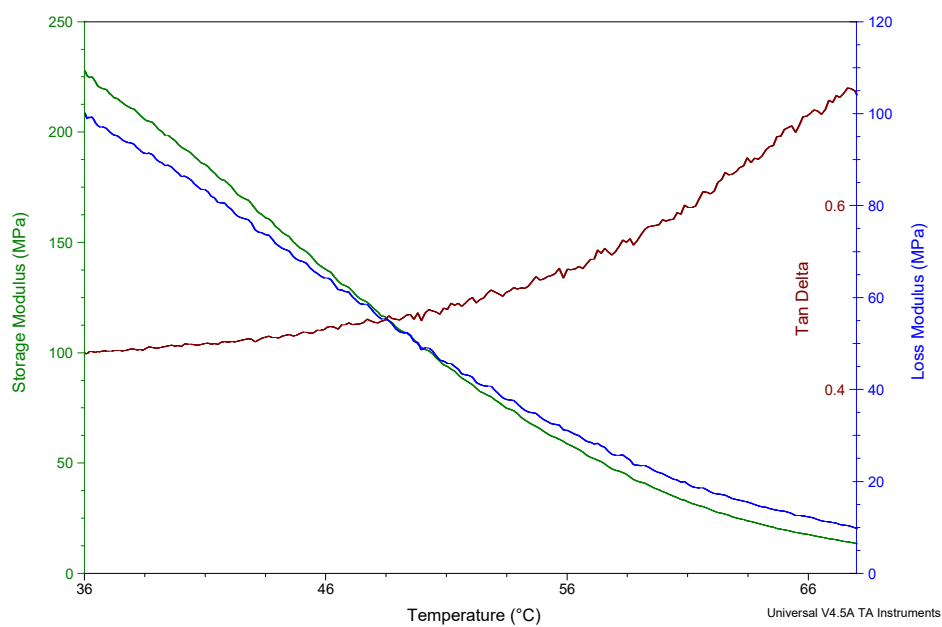


Fig. SB 15: Dynamic mechanical analysis results of a sheet made by exposing a SU8 film for 40 sec with a 2 mW/cm<sup>2</sup> UV light source. These results are associated with specimen 3 of this kind.