



Simulation Data Sheet

DOWSIL™ 795 Structural Glazing Sealant (SGS)

Hyperelastic Model Data

These are typical properties, not to be construed as specifications.

Best Fit Model	Constants	Average Percent Error
Polynomial 2nd Order (N=2)	$C_{10} = 1.6750 \times 10^5 \text{ Pa}$ $C_{01} = 2.8841 \times 10^4 \text{ Pa}$ $C_{20} = 4.4500 \times 10^2 \text{ Pa}$ $C_{11} = 1.42800 \times 10^3 \text{ Pa}$ $C_{02} = -1.2790 \times 10^3 \text{ Pa}$	10.26%
Standard Hyperelastic Models	Constants	Average Percent Error
Mooney-Rivlin	$C_{10} = 1.8303 \times 10^5 \text{ Pa}$ $C_{01} = 2.1181 \times 10^4 \text{ Pa}$	12.83%
Neo-Hookean	$C_{10} = 2.0182 \times 10^5 \text{ Pa}$	13.53%



Linear Approximation Model Data

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Strain Range	Linear Elastic Constants
$\epsilon = 0$ to 10%	$E = 1.643 \text{ MPa}$ $\nu = 0.5$
$\epsilon = 0$ to 25%	$E = 1.334 \text{ MPa}$ $\nu = 0.5$
$\epsilon = 0$ to 50%	$E = 0.983 \text{ MPa}$ $\nu = 0.5$

Notes:

All testing done at room temperatures and at quasi-static loading rates.

Polynomial Models may also be referred to as Mooney-Rivlin in FE software packages.

The data provided above is done so for the convenience of designing with Dow products. It is expected that use of this data in computer-based simulations will be accompanied with sound engineering practices of analysis, physical testing, and the proper application of relevant regional building codes.

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