

| Structure          | Drained Elastic Modulus | Poisson's ratio | Type of element    | No. of Elements | Material Model     |
|--------------------|-------------------------|-----------------|--------------------|-----------------|--------------------|
| Cortical bone      | 12 GPa                  | 0.30            | 3-D Solid (8 node) | 1759            | Linear Elastic     |
| Cancellous bone    | 100 MPa                 | 0.20            | 3-D Solid (8 node) | 3112            | Linear Elastic     |
| Posterior elements | 3.5 GPa                 | 0.25            | 3-D Solid (8 node) | 2112            | Linear Elastic     |
| Endplate           | 20 MPa                  | 0.40            | 3-D Solid (8 node) | 264             | Linear Elastic     |
| Nucleus            | 1.0 MPa                 | 0.40            | 3-D Solid (8 node) | 720             | Linear Elastic     |
| Annulus            | 4.2 MPa                 | 0.10            | 3-D Solid (8 node) | 1920            | Linear Elastic     |
| Annular fibers     | -                       | -               | Rebar Elements     | 1760            | Non-linear Elastic |
| Ligaments          | -                       | -               | Truss              | 32              | Non-linear Elastic |
| Facet cartilage    | 11 MPa                  | 0.4             | 3-D Solid (8 node) | 192             | Linear Elastic     |
| Facet contacts     | -                       | -               | Contact            | 24              | -                  |