

Why Siberian Larch? ... in more detail

For centuries, mankind has witnessed the unique performance of structures built out of Siberian Larch. Their experiences led them to refer to Siberian Larch as "The Tree of Eternity". Some homes and churches in Russia have been estimated to be in existence for over 800 years. Perhaps the most famous example of its longevity is its use in the construction of the ancient city of Venice.

Benefits are an impressive: dimensional stability, low cost of installation, low maintenance and an aesthetically beautiful timber. However, the most amazing feature of Siberian Larch is its natural resistance to decay. The following properties are responsible for its durability:

- **High Density** – Siberian Larch has an average density of 41 lbs/ft³. Higher densities make it more difficult for decaying organisms to penetrate the wood. Other than Ipe, Siberian Larch is denser than all the other most commonly used decking and cladding materials.

<u>Decking Materials</u>	<u>Density (lbs/ft³)</u>
Ipe	62
Siberian Larch	41
Southern Yellow Pine	35
Redwood	25
Western Red Cedar	23

- **Grows in a Harsh Climate** – The climate in which Siberian Larch grows is defined as extreme continental, meaning short hot summers and long cold winters. This results in short growing seasons and therefore a larger percentage of latewood and a very tight grain. Latewood is denser and mechanically stronger than the earlywood. This higher proportion of latewood equates into a more naturally durable wood.
- **Large Content of Heartwood** – In a scientific study on the properties of Siberian Larch, it was concluded that larch trees are composed of 75-90% heartwood in their natural existence. Heartwood is denser, less permeable, and more durable than the surrounding sapwood. It is not typical for other species to possess this large a percentage of heartwood.
- **Hard Wood** – The hardness of wood, which is highly correlated with density, is generally defined as resistance to indentation. Fewer dents and abrasions mean fewer places for water and fungi to penetrate the wood. Not only will harder wood have a positive effect on durability, but it will also help the deck to maintain a better appearance. Siberian Larch has a hardness of 1,100 lbs/in² as measured by the Janka Scale. Once again this outperforms most of the conventional decking materials.

<u>Decking Materials</u>	<u>Hardness (lbs/in²)</u>
Ipe	3,680
Siberian Larch	1,100
Southern Yellow Pine	690-870
Redwood	480
Western Red Cedar	350-580

- **High Resin and Extractive Content** – These resins and chemical deposits act as a natural antiseptic which is very unappealing to insects. Although Western Red Cedar and Redwood are very soft, they have in the past had a reputation of being good woods for outdoor applications. This is because they contain extractives that are toxic to decaying fungi. The chemical composition of wood can significantly affect its natural durability. This holds especially true for Siberian Larch. The resins and extractives in larch are credited the most for creating this high resistance to decay and rot. The primary extractive in Siberian Larch is arabinoglactan which is toxic to fungi. Arabinoglactan content in larch wood comes in at a high 10-15%.