



Larch

- a natural alternative





Wood protection - chemical or natural?

In Scandinavia outdoor timber constructions are usually protected against decay by chemical treatment. Only in Sweden 800 000 m³ of timber, mainly pine, is treated annually with creosote or salts of copper, chromium and arsenic. Annually several 100 000 tons of these chemicals is spread in the open environment - a serious environmental problem. The artificial impregnation of wood is the largest source to pollution of heavy metals in Scandinavia.

Wood from different tree species has different resistance to decay. Among the tree species in Northern Europe, the heartwood of Scots pine is relatively decay resistant when originating from old, slow growing forests, but these forests are becoming rare and are often protected. Therefore the supply of such wood is relatively small and will be even less in the future.



Photo J. J. Buitink

In larch the formation of heartwood starts early and in logs from mature stands the heartwood will make up to 90% of the volume, which is far more than in Scots pine of the same age. Thus, logs of larch are especially valuable in the production of articles made of the naturally impregnated heartwood.

Larch wood is appreciated for several good properties:

- Natural decay resistance
- High mechanical strength
- High wood density
- Big share of heartwood
- High resistance to fire
- High aesthetic value



Photo J. J. Buitink

Outdoor use of larch wood



In Russia the wood from larch has for centuries been used where good decay resistance is required. An example is the traditional use of larch logs as a base of houses where the logs are placed directly on the ground where it is attacked by decaying fungi. Even in these conditions, the larch logs will last for decades.

Here: An old Siberian log house made of larch also below the ground level.

Photo J-Å Falk



Here: Roofs covered with Siberian larch, Umeå Sweden.

Photo O. Martinsson



When Larch wood is exposed to the weather for years, it will get a greyish colour changing from dark grey in wet condition to shiny, light grey when it is dry.

Here: A 35- year old bridge of larch timber in southern Sweden

Photo O. Martinsson



Photo L Rinaldo

Heartwood of larch is a good alternative!

Heartwood of larch from old trees with small annual rings has the best resistance to decay. Although it is less durable as artificially treated wood, for many outdoor purposes it will stay intact for several decades. For example: Untreated telephone posts will have a practical lifetime of 25 - 30 years. The wood of larch has a higher density than pine and is stronger. In addition, it has a better resistance against fire.

The potential use of wood from larch is not limited to outdoor use. It is well suited for use indoor, in floors, panelling and furniture. When coated by lacquer the heartwood of larch has a warm, brown to reddish colour where the annual rings show a distinctive pattern. The sapwood is light yellowish, making a nice contrast to the heartwood.



In areas where the larch is growing, this tree species is traditionally used in constructions where its strength and durability is important, such as houses, fences and bridges.

Here: Bridge made of untreated European larch timber, Italy.

Photo A.Bonelli

Larch - a significant tree in boreal forest

Larch species grow in the northern parts of Europe, Asia and America and also in the mountains of Southern Europe. In the northern forests of East Siberia it is the dominating tree species. It was one of the first natural colonisers of Scandinavia after the last glaciation, but for unknown reasons it disappeared from this area already in prehistoric time. From the 1800th century it was reintroduced by man and is now spreading by natural seed dispersal.

The larch tree is fast growing and can be very large. It can grow on different soil types, but it will reach the best development on deep soils with adequate moisture. Its foliage is light green is rather transparent, allowing much light to reach the forest floor. A larch forest therefore will appear far lighter than one of spruce and also make it possible for grasses and herbs to grow under a stand of larch.

In larch forests much light will penetrate the crown canopy. The forest floor will be covered with herbs, grasses, scrubs and even small trees. To visiting people these forests will appear lighter, more open and friendly than a dark forest of mature spruce.



Here: A 50-years old stand in Kivalo, Finland

Photo O. Martinsson.

With its transparent, light green colour in the spring and the yellow needles in the autumn, larch offers a unique play of colours in the coniferous forests. It is used for ornamental purposes in parks. In winter the branches without needles will not collect much of the falling snow and on the ground there will be a thicker snow layer than in a spruce forest.

Even as the stand grows higher, this light-demanding tree will still allow light to pass through the canopy and reach the forest floor. Larch can be several hundreds years old and reach large dimensions.



A visitor in a forest like here in Raivola, Russia, will be small among these giant trees. Look at the man standing at the bottom centre of the picture. Photo. O. Martinsson.

SIBLARCH - the project

SIBLARCH is an INTERREG Northern Periphery project for developing Siberian larch in forestry and timber products. The project is a co-operation between research organisations, regional agencies and enterprises in Finland, Iceland Norway, Sweden and Russia.

The three main fields of investigation are:

- Develop Siberian larch timber in wooden products for out door use
- Develop methods for establishing Siberian larch forest stands
- Progeny field test of Siberian larch in Scandinavia, Finland, Russia and Iceland

The Project web site is www.siblarch.net

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