

## 62044 Spruce Gum KUUSK

*Picea abies*, commonly known as the Norway spruce, produces a resin that is valued for various applications, including manufacturing of medical salves, varnishes, adhesives, and as a source of terpenes.

Natural resin is a complex composition of components such as resin acids, lignans and coumaric acid. The levels of these components are dependent on what type of coniferous tree resin it is and when it is collected i.e. fresh physiological resin or matured resin collected from trunk of the tree

In vitro studies have shown that natural resin is strongly antimicrobial against a broad spectrum of common bacteria, fungi and yeasts. The antimicrobial effect is based on resin acid that breaks down the cell wall and the cell membrane and because of that the cell can no longer produce energy and eventually it dies. Microbiological studies have proven that resin is also effective on antibiotic resistant microbes (MRSA & VRE). Spruce resin affects both gram positive and gram negative bacteria. Reducing the bacterial and fungal contamination of the wound is generally known to improve the wound healing. In clinical tests, resin salve has shown to improve wound healing and reduce pain on various wounds including pressure ulcers, complicated surgical wounds and diabetic foot ulcers.

*Source: Wikipedia, Sipponen A: Coniferous resin salve, ancient and effective treatment for chronic wounds – laboratory and clinical studies. Academic Dissertation 2013. University of Helsinki*

### Product Specification

Appearance	Color varies from grey to yellow-brownish chunks
Odor	characteristic, like conifers
Density (20°C)	0.900 – 1.100
Content of resin	70 – 75 %
Solubility in ethanol	1 : 3
Melting point:	75°C
Impurities	25 – 30 %