

## Stockmar Modelling Beeswax - Ingredients

Ingredient	% approx.
Paraffin (microcrystalline waxes)	64
Beeswax	30
Venetian turpentine	3
Synthetic organic and/or synthetic inorganic colour pigments	3 or more
Why "% approx."? : Depending on the colour force of certain colours, different percentages of colour pigments are required. The other percentages can be influenced by that.	

## What makes our modelling beeswax so special?

Stockmar Modelling Beeswax has been developed in collaboration with teachers, educators and parents since production started in the 1940's. On the basis of this exchange of views and cooperation, Stockmar has always focused on the following three requirements:

- Modelling properties
- Safe for our consumers health and the environment
- Colour palette

### Modelling properties

Like the transparency and the colour formulation, the modelling properties of our modelling beeswax clearly set it apart from other modelling materials. Since the development of the very first Stockmar Modelling Beeswax back in the 1940's, we have always specifically ensured that the following conditions have been met.

Stockmar Modelling Beeswax must:

1. be usable more than once
2. be malleable (but in a way that the modeled objects don't lose their shape afterwards)
3. come with harmonious colours and transparency
4. be suitable for modelling large as well as small objects

These modelling properties drastically differentiate Stockmar Modelling Beeswax from the soft modelling substances often used by smaller kids, as well as air-drying clay-like modelling materials or heat-hardening acrylic-based modelling substances.

Stockmar Modelling Beeswax is completely free of fillers. This and the blend of waxes used provide truly beautiful, vibrant colours especially in daylight with the light shining through. Stockmar Modelling Beeswax is also suited for modelling in thin layers, and blending the colours therewith, because of the wax components used. In addition to beeswax, Stockmar Modelling Beeswax also contains industrially manufactured microcrystalline waxes.

The balanced coordination of these wax components, are the result of decades of manufacturing experience and fulfilling customer requirements. With the help of our customers, our modelling beeswax is

particularly suitable for all kinds of modelling projects – without being sticky and without smearing or crumbling during use.

The fine scent which makes Stockmar Modelling Beeswax so strongly favoured emanates from the beeswax and the Venetian turpentine, obtained from larch trees. Furthermore, because the essential oils in both ingredients have preserving properties Stockmar Modelling Beeswax is entirely preservative-free.

Instructions for modelling with the Stockmar Modelling Beeswax are available to download on our website at [www.stockmar.de](http://www.stockmar.de) - also in English.

### Safe for health and the environment

At Stockmar, we like to call our customers quality sensitive customers, particularly those involved in schools and kindergartens – teachers, educators and parents – who we see as our core customers. We know that, above all, these customers value Stockmar Modelling Beeswax for its colour formulation and modelling properties.

We are also conscious of the fact that these quality sensitive customers especially give great importance to health, environment and sustainability matters.

Since Stockmar began manufacturing modelling beeswax, an unequivocal requirement has always been that we could and would only offer our customers a product which is absolutely safe for health and the environment.

To safeguard this, the selection process naturally ensures that all our modelling beeswax formulation components meet all applicable toy product safety regulations. If we regard these regulations as insufficient, then we use standards pertaining to foods and cosmetics as a health and safety benchmark for our modelling beeswax. For example, the microcrystalline waxes we use comply precisely with cosmetic industry regulations (where they are also applied).

Moreover, to enhance both our safety and that of the customer, we commission an independent residual analysis laboratory (Labor für Rückstandsanalytik, Bremen, Germany) to perform sample raw material tests of each and every resource batch supplied to us.

On the Stockmar Modelling Beeswax packaging, next to the CE label that is a given for all toys, the level of reliability that our product quality achieves through component selection and raw material inspections is represented by the quality certification 'spiel gut' issued by the Working Committee for Children's Games and Toys (info: [www.spielgut.de](http://www.spielgut.de)) and the American ACMI 'AP - conforms to ASTM D-4236' label (info: [www.acminet.org](http://www.acminet.org)).

### Colour palette

As a result of Stockmar's association with Waldorf education and working together with Waldorf teachers and educators, the basis for our colour palette effectively emerged in a matter of time. Stockmar's colour circle was developed from Goethe's colour theory, with the harmonious coordination of the primary colours red, yellow and blue and the secondary colours orange, green and violet.

The pigments used by Stockmar are synthetic organic pigments produced in Europe (Germany, Switzerland). Essentially, they are selected according to the following two conditions:

1. Pigments that lend Stockmar Modelling Beeswax the shade of colour that we require to complete our colour circle.
2. The pigments comply with all legislative regulations, enabling us to freely claim that Stockmar Modelling Beeswax is safe for health and the environment. Read more on this below.

Many of our customers say our modelling beeswax is "so beautifully vibrant". This is due to the selection of pigments, the mixing ratio between the pigments and the rest of the components as well as the transparency of the blend of waxes in our modelling beeswax. It is the formulation used for Stockmar Modelling Beeswax that produces the modelling properties mentioned above.

### **Why Stockmar uses paraffin (microcrystalline wax) in its modelling beeswax**

Paraffin is broadly used due to its non-toxicity and water insolubility. It is often contained in ointments, skin creams and lip balms, and is even a principle component in many skin protection creams for small children. Paraffin is also used in foods (sweets, chewing gum, wax coatings for cheese) and in medical applications (as an antidote for poison and as a laxative). The possibility of deposition in the human body only exists in the case of constant intake of the substance.

A constant intake is highly unlikely in the case of modelling beeswax.

According to expert opinion, however, the detrimental effect to health in the case of paraffin does not stem from any potential deposition, but through heating to high temperatures as this could release carcinogenic substances. Accordingly, hazards to health relate to people whose work, for example, involves heating paraffin for long periods and who breathe in the resulting vapours; which naturally does not apply to consumers of cosmetics, medication and modelling beeswax.

For our modelling beeswax, we use paraffin (microcrystalline waxes) with a high melting point, that is it first melts at a temperature of around 70 °C (158 °F). Can this happen with modelling beeswax used by children or even modelling beeswax that have been swallowed by kids? 70 °C? We don't think so!

The paraffin in our modelling beeswax has an extremely positive impact on the modelling properties. It maintains the transparency and colour intensity of the wax sheets. And it is due to the paraffin that the modelling material doesn't stick to the fingers, a characteristic which can't be achieved with 100% beeswax or with plant based waxes (stearin).

Paraffin is produced as a by-product in oil refineries and, as a crude oil product, is naturally not a renewable resource. Nevertheless, we currently have no viable alternative to paraffin that would be resource-conserving and ecologically friendly and at the same time maintain the modelling properties of the product to the extent of the high melting paraffin we use.

Other frequently used resources that are eagerly touted as renewable, such as soy and palm oil, do not produce the same product quality and in our opinion are not ecologically friendly. As a result of the increase in global demand, they lead to the creation of monocultures, in turn prompting the clearing of rainforests and disappearance of areas used for agriculture, with all the resulting negative ecological and social consequences.

## **Why Stockmar Modelling Beeswax contain 30% beeswax – no more and no less**

Stockmar Modelling Beeswax contains 30% natural beeswax, which provides the right degree of transparency and gives off a pleasant beeswax scent. In addition, the essential oils in beeswax have a preserving effect, enabling us to completely abstain from using preservatives in our modelling beeswax. A proportion of beeswax in modelling beeswax that is appreciably higher than 30% would have a negative impact on the modelling properties, and the material would stick to the fingers while using it. Moreover, the actual colour of the beeswax would distort the colour shades. As a consequence, the use of a higher proportion is not necessary.

Beeswax has advertising appeal: it's natural, it's 'renewable', it smells good and everyone admires and loves bees. Beeswax – what kind of substance is it exactly? It is a precious and limited natural product. In the interests of bees, whose numbers are under threat worldwide, any use of beeswax should be acutely conscious, measured and responsible. Any beekeeping geared towards increasing beeswax production would not constitute natural beekeeping and would have ominous consequences from an ecological perspective.

Why use more beeswax in our modelling beeswax if it wouldn't enhance the product quality and would only unnecessarily consume a precious natural product?

That is precisely why Stockmar consciously uses 30% beeswax for the Stockmar Modelling Beeswax.

Visit [www.mellifera.de](http://www.mellifera.de) (most parts only in German) for more interesting information on beeswax and bees.

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