

PRINTLAC®

## PRINTLAC® special overprint paste

10 L 4160

### Range of application

PRINTLAC special 10 L 4160 is a particularly good-drying and abrasion-resistant type of print varnish, imparting neither a gloss enhancement nor a matting effect to the printed surface but keeping its appearance more or less unchanged.

It is advantageous to use this varnish especially

- for jobs showing a lack of drying or rub resistance
- as a protective coating for prints on matt-coated stocks to prevent scuffing or carbonizing effects

This varnish can be run with or without fount application, whereby the latter is to be preferred if prints have insufficiently dried. PRINTLAC special 10 L 4160 lends itself ideally for wet-on-dry application but can also be printed wet-on-wet.

Contact yellowing cannot be completely ruled out when printing varnishes are used. This is caused by volatile, yellowish coloured decomposition products being formed during oxidative drying; these products can be deposited in the paper coating or even react chemically with constituents of the coating.

By conducting extensive development work, however, we have succeeded in greatly reducing the level of unfortunately unavoidable yellowing and in producing print results that are as good as free of yellowing considering an oil-based varnishing system has been used.

### Special properties

- Silky surface gloss
- Quick oxidative drying
- Fast setting
- Very good pile behaviour
- Very good abrasion resistance
- Little tendency to yellowing

### Advantages of print varnishes over other coating systems

In the field of package printing, print varnishes have now largely been replaced by alternative coating systems, for example by dispersion coatings. In other areas, however, the use of print varnishes is essential.

#### Some of the reasons for this:

- They guarantee spot varnishing true to register
- It is possible to coat light-weight papers with the substrate remaining dimensionally stable

- Oil-based varnishes can be seen as unpigmented offset printing inks. They are therefore handled in the same way, which includes the use of the same washing mediums. There is no requirement for the inks to possess particular fastness properties (for example resistance to nitro or alkalis)

## Special remarks

Note should be taken of the following when using print varnishes:

In contrast with dispersion coatings and UV coating, print varnishes are comparatively slow-drying. The mechanism of oxidative drying, which produces stable coating films in print varnishes as a result of the cross-linking of fatty acid chains, can occupy several hours or even days, depending on the drying conditions. Drying can be accelerated by the use of IR radiators. However, pile temperatures of more than 35 °C must always be avoided as there is a risk of blocking. The use of inks in pre-printing that stay fresh can result in the delaying of varnish drying, especially on papers with low absorption capacity.

Contact yellowing cannot be completely ruled out when print varnishes are used. The cause of this is that volatile, yellowish coloured fission products are formed during oxidative drying: these products can be deposited in the paper coating or even react chemically with constituents of the coating.

Standard print varnishes are not suitable for finishing food packaging. The fission products necessarily formed as part of the oxidative drying process can affect the smell and taste of the contents which prohibits their use.

## Generell requirements for the packaging of food and semi-luxury goods

Food and semi-luxury goods packaging must not transfer any components to the packed product which

- endanger human health,
- bring about a change in the taste or odour of the packaged goods, or
- bring about a change in the composition or the appearance of the packaged goods.

Therefore sheet-fed offset printing inks and varnishes used for the production of food and semi-luxury goods packaging must be „low migration“ and must not affect the taste and odour of the packed product.

PRINTLAC special 10 L 4160 may release odour-generating by-products during the drying process and is neither low-migration nor low-odour. Oxidative drying overprint varnishes like PRINTLAC special 10 L 4160 are generally not recommended by member companies of the **huber**group for the production of packaging for food and semi-luxury goods. These varnishes can only be used for this purpose if any transfer of substances from the printed ink film to the packed product (by migration or set-off) as well as a deterioration of the organoleptic properties of the packed product is excluded by suitable packaging design, by appropriate processing conditions and the use of a primary packaging material with sufficient barrier properties.

For further information, please refer to our information sheet „Note regarding the use of standard sheet-fed offset printing inks (setting and/or oxidative drying) and standard water-based varnishes for the manufacture of food packaging made of paper and board“.

## Printing auxiliaries

The specified print varnish is ready for printing and can normally be used without the help of additives. If in exceptional cases it is necessary to reduce the tack for papers that are particularly susceptible to picking, **Linseed Oil/Printing Oil 1405** should be used.

## **Classification**

Safety data sheet available on request.

Contact addresses for advice and further information can be found under [www.hubergroup.com](http://www.hubergroup.com)

This Technical information sheet reflects the current state of our knowledge. It is designed to inform and advise. We assume no liability for correctness. Modifications may be made in the interest of technical improvement.