

PRODUCT DATA SHEET

Product & Reference: 7GK092 Water Based Laminating Adhesive.

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7GK092 WATER BASED LAMINATING ADHESIVE

A one component self crosslinking water based adhesive intended for the lamination of orientated polypropylene film to printed paper based substrates.

PHYSICAL PROPERTIES

Appearance	A white milky liquid
Weight per litre	1.03 ± 0.02 Kg/L @ 21°C
Viscosity	17 - 21 seconds, B4 cup @ 21°C
Viscosity	12 – 16 seconds, Din 4 cup @ 21°C
Weight solids	51 ± 1%
Flash point	Non flammable

HEALTH AND SAFETY

This product is intended for use by professional applicators in industrial situations in accordance with the advice given on the Health and Safety Data Sheet and the containers. If for any reason a copy of the relevant Health and Safety Data Sheet is not immediately available, the user should contact Polytoll Ltd to obtain a copy before using the product.

APPLICATION DETAILS

1)	Mixing instructions	Ready for use
2)	Thinning instructions	Use as supplied or thin with water up to 5%
3)	Substrate	1) Corona discharge treated OPP film 2) Lamination grade printed and unprinted paper based substrates
4)	Treatment of OPP	OPP film: Not less than 38 dynes/cm
5)	Surface tension of printed and sealer coated surfaces	Not less than 38 dynes/cm
6)	OPP film thickness	12 - 20 microns (gloss/matt films)
7)	Method of application	Reverse roller coater and doctor blade
8)	Recommended film weights guide	6 - 12 gsm dry 12 - 24 gms wet
9)	Drying	Dry to a clear tacky film using drum drier, or hot air. Temperature usually 60° - 70°C
10)	Nip roller temperature for combination of substrates	50° - 85°C
11)	Equipment cleaning	Use water for wet adhesive Use methyl ethyl ketone for dry adhesive

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STORAGE CONDITIONS

Store adhesive at 5° - 30°C

SHELF LIFE

6 months in unopened containers.

CURE TIME

Optimum bond strength properties are achieved when the dry adhesive cures by self crosslinking. This can take up to 48 hours at ambient room temperature conditions.

LAMINATING AND FURTHER PROCESSING

We recommend that all processes involving the use of this adhesive are proofed before commencing with full production work because many factors that could influence the results may arise during lamination and processing.

GENERAL QUALITY OF SUBSTRATES, PRINTING INKS, AND SEALER COATS

Not all substrates, inks, and sealer coats are suitable for lamination purposes. Therefore it is vitally important for all parties involved to understand the overall requirements and to communicate any necessary information which could have a bearing on the quality of the finished article.

All inks which are intended for laminated work should be ink manufacturers lamination grade products. Printing inks and sealer coats must not contain excessive amounts of surface active additives such as waxes and silicones.

SUITABILITY OF PAPER AND BOARD

For optimum results lamination is best carried out on papers and boards with flat, smooth, and hard coated surfaces, and low absorption characteristics. The substrates should also be reasonably dimensionally stable in relationship to changes in moisture content and atmospheric humidity. Many kinds and thicknesses of these substrates can be used but the quality of the final finish will be relative to the original quality of the selected substrate. Substrates should be non-yellowing on exposure to natural daylight.

SUITABILITY OF PRINTING INK RECIPES FOR LAMINATED WORK

For best results the inks should have the following general characteristics:

- Quick drying capability on the chosen substrate, and applied so as to achieve an acceptable standard of coating that is well dried with good adhesion to the substrate surface.
Please note that excessive amounts of retained slow drying volatile matter from some ink recipes can cause swelling and expansion of the O.P.P. film and/or even soften the adhesive and print, thus resulting in loss of adhesion in the form of "piping" or "wrinkling".
- Contain minimal amounts of surface active additives such as waxes and silicones.
- High tinting strength so that film thicknesses can be minimised and drying times reduced accordingly.
- Covered with only minimum amounts of very fine grade anti set-off spray powders.
- Contain pigments which are resistant to bleaching and bleeding. In particular there is a risk of reactions occurring with unstable sensitive pigments such as Reflex Blue, Rhodamine Red and Pantone Purple.
- Metallic gold and silver effect inks (i.e. based on bronze or aluminium powders) must be non-reacting with the laminating adhesive, and must be formulated with a suitable binder system to ensure adequate bonding between the layered flakes of metal. An inadequate binder could result in the ink layers splitting apart after lamination.

This Data Sheet supersedes all previous Data Sheets supplied to you relating to this product. It contains important information which must be communicated to the user. The user must satisfy himself of the suitability of the product for the intended application and surface, as surface and application conditions are beyond Polyroll Ltd control. The user must also satisfy himself of the suitability of the product in circumstances other than those set out in this Data Sheet. The user must also maintain appropriate quality control procedures. Polyroll Ltd is always willing to answer user's enquiries regarding its products.