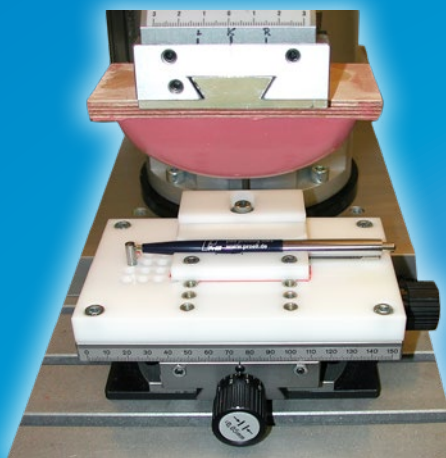


## Pad Printing Inks for a Variety of Applications and Substrates





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Proell offers a broad range of one and two-component ink systems for decorating and marking products in industrial pad printing, as well as for toys and advertising gadgets.

### KS-U

Fast drying, high gloss multi-purpose ink for printing on rigid PVC, polystyrene, ABS and SAN, acrylics and polycarbonate. To achieve adhesion to coated materials, polyamide, pre-treated polypropylene, thermosets and metal, stoving and/or the use of hardener is recommended. KS-U has been developed for processing on high-speed machines with closed ink cups.

Thinner: M 207  
Hardener: 030

### Tampo-Jet® ECO

Fast drying one-component pad printing ink for printing on PC, PMMA and ABS. Pre-tests are necessary for SAN and PS. Tampo-Jet® ECO is suitable for decorating toys. The ink is free of halogens, PVC and plasticizers, cyclohexanone and formulated without aromatic solvents. Tampo-Jet® ECO Basic Colors are certified (DIN EN 71, part 3) for decorating toys.

Thinner: F 001

### Norifin® PP N

Satin gloss pad printing ink for printing on untreated polypropylene.

Thinner: F 002  
Hardener: 002

### NoriProp N

Glossy ink system for printing on untreated polypropylene.

Thinner: M 202  
Hardener: 002

### Norilit® U-SG

Satin gloss pad printing ink for printing on metals, untreated polyester films, pre-treated polyethylene and polypropylene, polycarbonate, powder coated and lacquered materials.

Thinner: M 202  
Hardener: 002

### Norilit® CS

Satin gloss ink system for printing on lacquered and powder coated materials and on certain UV coated substrates.

Thinner: F 002  
Hardener: 002

### Sorte P

Glossy pad printing ink system for polystyrene, ABS, SAN, acrylics and polycarbonate. Sorte P has been developed especially for materials sensitive to solvents and which are prone to stress cracks.

Thinner: F 002  
Hardener: 002

### Thermo-Jet®

Multi-purpose ink for rigid and soft PVC, acrylics, polycarbonate, pre-treated polyester and polyolefins. The fast drying Thermo-Jet® ink displays

good printability and high resistance to chemicals and abrasion.

Thinner: F 002  
Hardener: 002

### NoriPUR®

Glossy one or two-component ink for PVC, pre-treated polyester and polyolefins, acrylics, polycarbonate, wood, metal and, after pre-testing, for polystyrene, ABS and SAN.

Processed as two-component ink, NoriPUR® shows excellent resistance to chemical and mechanical influences. NoriPUR® Basic Colors are certified (DIN EN 71, part 3) for decorating toys. Highly opaque color shades for printing on dark substrates are available from stock.

**Adhesion Promoter 103** can be added (instead of hardener) to achieve better adhesion to hard coated or TPU materials.

Thinner: M 202  
Hardener: 002

### Tampo-Jet® GMI

Two-component pad printing ink for printing on glass and metals. After stoving, the printed ink film achieves outstanding resistance to chemicals and abrasion. Tampo-Jet® GMI shows good printing properties and can be used for decorating perfume flacons and stainless steel products.

Thinner: F 002  
Hardener: 101

### Tampo-Jet® Aqua

Water-based pad printing ink for the decoration of various types of wood. Depending on the wood





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stiffness and absorptivity, precise prints can be performed especially on beech and birch wood. The surface resistance of the printed ink against hand perspiration can be increased by adding crosslinker.

Tampo-Jet® Aqua can even be used for printing tagless labels onto garment directly. Washing resistance can be achieved by adding crosslinker. The new water-based pad printing ink is formulated without any solvents. Due to the addition of additives, the final solvent proportion is below 2 %.

Thinner: Water  
Crosslinker: WB 001

#### Auxiliaries for pad printing inks:

If not otherwise stated, addition of **Hardener 001** and **002** improves abrasion and chemical resistance of the printed ink significantly. Addition of **Antiblocking Agent L 30220** makes the printed ink surface satin glossy, but improves the abrasion resistance noticeably.

**Matting Agent 2009** can be added to any ink system to reduce the gloss. Addition of flow promoting agent **Norilon 5** improves the surface of the printed ink. When printing electrostatically charged substrates, addition of **Norilin® A** reduces the electrostatic charge.

**Primer No. 1** is an adhesion promoter especially developed for the pre-treatment of polypropylene.

#### Selection of Color Shades

The Proell Color Matching System consists of 12 Basic Colors and one lacquer. By means of these shades, almost any color shade can be matched. A variety of standard, transparent, and highly opaque colors, half-tone inks as well as metallic and effect pigment colors are available in the pad printing range.

Proell printing inks and lacquers are manufactured in compliance with RoHS and REACH.

Proell inks do not contain any pigments based on toxic heavy metals.

The quality and environmental management system of Proell KG is certified according to ISO 9001 and ISO 14001.

Custom-made ink and coating solutions are our business.



## Pad Printing Inks – Which Ink for which Substrate

	KS-U	Norfin® PP N	Norlit® CS	Norlit® U-SG	NoriProp N	NoriPUR®	Sorte P	Tampo-Jet® ECO	Tampo-Jet® GMI	Thermo-Jet®
One-component ink	✓	✓	✓	✓	✓	✓	✓	✓		✓
Two-component ink						✓			✓	
<b>Substrates</b>										
Acrylic glass (PMMA)	■	▲				■	■	■		■
Glass									■	
Coated substrates	▲	▲	▲	▲	▲	▲	▲			▲
Thermosets	▲	▲	▲	▲		▲	▲			
Wood, plywood	■	■	■	■		■	■			■
Leather						▲				▲
Metal / non-ferrous metal	▲			■		▲			■	
Polyamide	▲					▲				
Polycarbonate	■			■		■	■	■		■
Polyester pre-treated				■		■				■
Polyester untreated				■						
Polyethylene pre-treated	▲	■		■	■	■	■			
Polypropylene pre-treated	▲	■		■	■	■	■			
Polypropylene untreated		■			■					
Polystyrene, ABS, SAN	■					▲	■	▲		▲
Polyurethane						▲				
PVC rigid	■	▲		■		■	■	■		■
PVC plasticized, self-adhesive films				■		▲				■
<b>Properties</b>										
Drying										
physical	✓	✓	✓	✓	✓	✓	✓	✓		✓
physically reactive						✓			✓	
Grade of gloss										
high gloss	✓									
glossy					✓	✓	✓			✓
satin gloss		✓	✓	✓				✓	✓	
<b>Auxiliaries</b>										
Thinner / Percentage (%)	25	20	20	30-35	20-25	30-40	30-35	30	30	30-35
Hardener	030	002	002	002	002	002	002		Adhesion Promoter 101	002

✓ = applicable; ■ = basically suited; ▲ = can be suited

**Important:** Printing results, to a large extent, depend on the substrate as well as the conditions of use. We recommend checking your substrate under your printing conditions before performing any production runs. Materials that are supposed to be identical may vary from manufacturer to manufacturer and even from batch to batch. Some substrates may have been treated with sliding agents, antistatic or other additives which can impair the adhesion of inks.