Technical Information
Pad Printing Ink

SunChemical®
Coates Screen Inks

POLYAMIDE

Information about Pre-Treatment and Printing

Substrate Polyamide

Polyamides are thermoplastics. They exhibit excellent stability and toughness as well as good solvent resistance. They are often used for technical construction parts.
Common trade names are Nylon, Perlon, Akulon. There are various types of Polyamide (abbreviation PA). The polyamide types mostly used for technical applications are PA 6 and PA 6.6. These two types have a similar chemistry, however, they are produced in a different manner.

Printing:

- Generally polyamide shows good printability without pre-treatment directly after production (injection moulding).
- However, polyamide has a property influencing printability. When stored after production the material tends to absorb water/humidity from the air. The longer the materials are stored the more adhesion problems you will experience. Sometimes there is no adhesion at all. Printers have no possibility to measure the content of moisture of the material.
- Therefore pre-tests to determine printability are always essential.

Pre-Treatment:

The absorbed water/humidity has to be removed from the PA material with heat application. PA shows good thermal stability up to 100°C. Depending on the type the melting point is approx. 170 – 260°C.

- **Flame-Treatment:** **Flame applied to substrate using suitable flame burner.**
- Hot air blower: Leister blower or similar, setting: ca. 400°C.
- Heat cabinet: Up to 100°C, check thermal properties of the PA (depending on product)
- Ethanol: Wash PA surface with ethanol (spirit), however limited effect.

Pre-treatment process (temperature/time/distance from flame to object) has to be determined under local conditions.
Pre-treatment should be carried out shortly before printing.

Pad Printing Inks Suitable for Printing of Polyamide

- **TP 300** **processing as 2-component system with hardener TP 219 (10 : 1) recommended**
- **TP 218** **2-component ink system, 4 : 1 with hardener TP 219**
- TP 400 processing as 2-component system with hardener TP 219/12 (10 : 1) recommended
- TP/UV-P2 UV-curing pad printing ink, if necessary with hardener TP 219/N (10 : 1)
- TP 313 processing as 2-component system with hardener TP 219 (10 : 1)
- TP 273/T processing as 2-component system with hardener TP 219 (10 : 1)

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