

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)

The statements in our product and safety data sheets are based on our present experiences, however they are no assurance of product properties and do not justify a contractual legal relationship. We provide these details to inform customers about our products and their possible applications. However, on account of various factors influencing processing of our products it is absolutely essential to carry out printing trials under local production conditions. Choice of individual ink types and their suitability for the intended application is the sole and entire responsibility of the user. We do not assume any liability for any problems of technical or process-related nature. Any liability shall be limited to the value of the goods delivered by us and processed by the user.

All former product data sheets are no longer valid.

February 2017 - Version B1

Coates Screen Inks GmbH
Wiederholdplatz 1 90451 Nürnberg
Tel.: 0911 6422 0 Fax: 0911 6422 200
<http://www.coates.de>