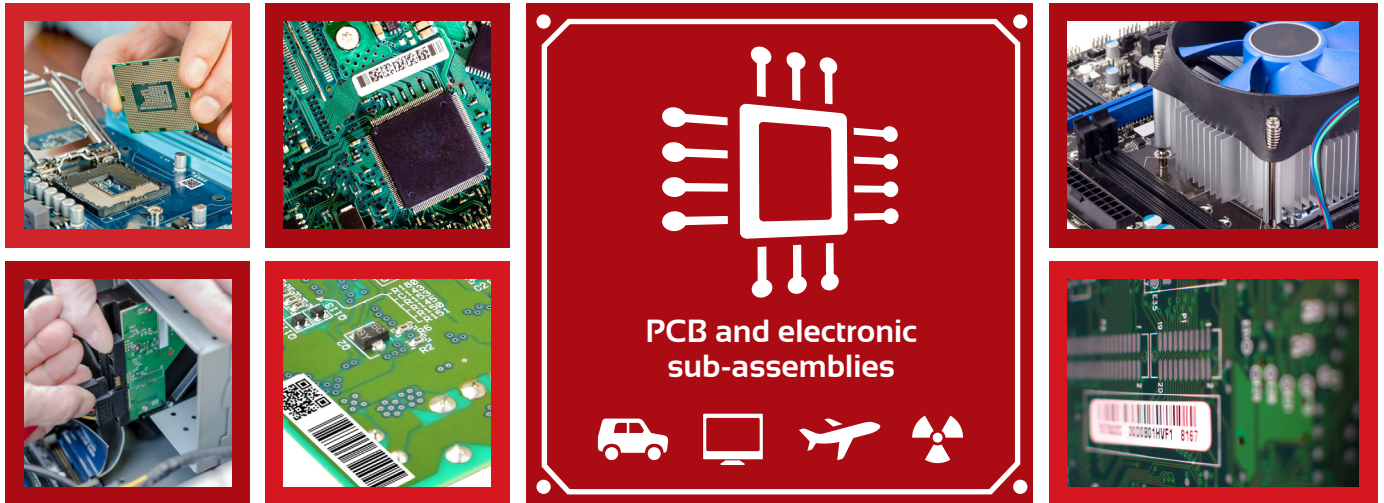


SPECIALITY RESIN FOR FLAT HEAD PRINTERS

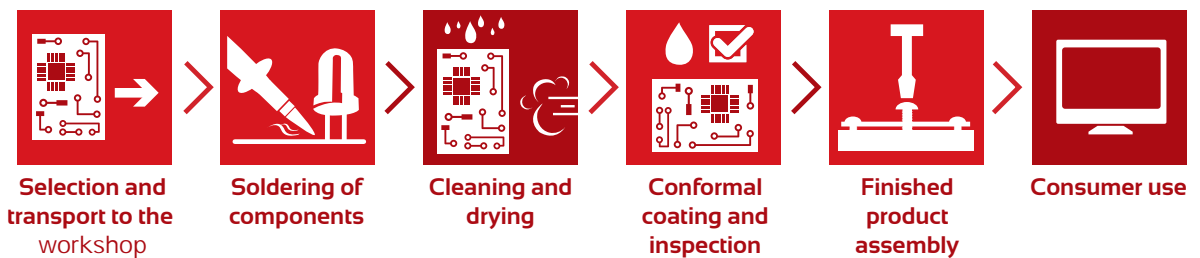
Thermal Transfer ribbon by ARMOR dedicated to the electronics industry.

AXR®EL has been specially designed to meet ARMOR's high-quality standards, offering optimum durability in line with the highly specific demands of electronic products, particularly printed circuit boards.



ELECTRONIC PRODUCT LIFE CYCLE

The manufacture and use of printed circuit boards involves various aggressive phases for product identification.



AXR®EL: GUARANTEES LEGIBLE AND DURABLE PRINTING

- Ensures that information remains legible while withstanding to the stresses that the product is subjected to during its life cycle, from production involving aggressive substances to consumer use.
- Guarantees compatibility with the specific label materials used in the electronics industry: these must be resistant to high temperatures and the various treatments applied to the circuit boards.
- Protects both the environment and the user, a priority for ARMOR. AXR®EL is a halogen-free ribbon.



RESISTANCE



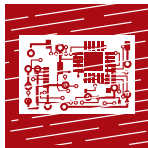
• Solvents

- ✓ IPA
- ✓ Exxsol™
- ✓ Aquanox®
- ✓ Vigon®
- ✓ Atron®
- ✓ Promoclean™
- ✓ Topklean™

The print remains perfectly legible with an A-grade under ANSI standard for barcode readability. Laboratory tests performed under simulated real-life conditions.

• Temperature

The print remains perfectly legible to high temperatures. Tested up to 300°C/572°F.

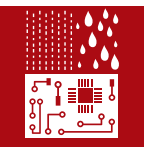
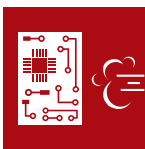


• Rubbing

No degradation recorded after rubbing with an abrasive 16mm pad with an applied weight of 450g/cm² for 10 cycles.

• Drying

The barcodes remain legible with an A-grade under ANSI standard for barcode readability. Laboratory tests performed under simulated real-life conditions.



• Conformal Coating

The print remains intact after conformal coating (A thin polymeric film which conforms to the contours of a printed circuit board to protect the boards components).

SUBSTRATE COMPATIBILITY

High gloss papers ● ○ ○

Synthetics ● ● ●

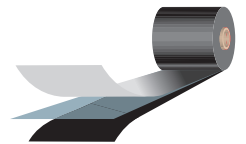
- ↳ Polyimide ✓
- ↳ Polyester ✓
- ↳ Acrylate ✓

PRINTING CHARACTERISTICS

- **Blackness:** DOR: 1.80
- **Sharpness:** logos and small characters
- **Barcode at 0°:** ANSI A
- **Barcode at 90°:** ANSI A
- **Printing speed:** 8 ips - 203 mm/s

RIBBON SPECIFICATIONS

- **Backcoating:** silicon-based
- **Friction coefficient:** Kd<0.2
- **Ink:** resin
- **Melting point:** 75°C/167°F
- **PET film thickness:** 4.5 µm
- **Storage:** 12 months, 5-35°C (40-95°F), 20-80% humidity
- **Ribbon thickness:** < 9 µm



CERTIFICATIONS

- REACH/SVHC: 1907/2006/EC
- Halogen free: EN 14582: 2007
- Heavy metals: 2002/95/EC; 2002/96/EC; 2011/65/EC
- IPC A-610: Acceptability of electronic assemblies.
- EN 50419: Electronic equipment marking.

SUSTAINABLE DEVELOPMENT

The film is produced in one of the industry's most organised and awarded factories:



Quality, Safety, Environment:

- ISO 9001: 2008
- ISO 14001: 2004
- OHSAS 18001: 2007
- ISO 50001: 2011



Responsible Care: International Council of Chemical Associations' charter towards constant improvements in health, safety and environment.



Global Compact: UN initiative inviting companies to apply fundamental ethical and environmental values.



All ARMOR product data sheets are available at our website www.armor-tt.com