

# AWR<sup>®</sup> 470

STANDARD - WAX  
FOR FLAT HEAD

THERMAL TRANSFER RIBBONS

**AWR<sup>®</sup> 470** is a general purpose ribbon particularly adapted to standard label printing.

The ink provides excellent printing quality of standard barcodes, very small text, large characters and logos, at a blackness up to 2.1 (ODR).

The ribbon structure allows printing on all kinds of papers and uncoated papers in particular. This feature makes the ribbon highly recommended to the standard labelling market. Printing is also possible onto various synthetics.

The printed image offers heat resistance up to 60°C.

Those characteristics remain at speeds up to 300 mm/s (12 ips) and with 200, 300 and 600 DPI printheads.

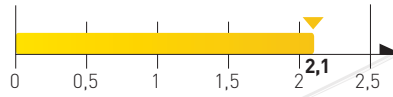
AWR<sup>®</sup> 470 grade features ARMOR's outstanding backcoat technology, ensuring excellent printhead protection, preventing clogging and static build-up.



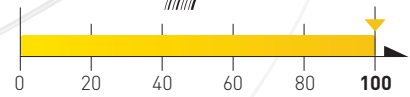
- ▶ PARTICULARLY ADAPTED TO ALL KINDS OF PAPER SUBSTRATES
- ▶ VERY GOOD SENSITIVITY
- ▶ EXCELLENT BLACKNESS

## PRINTING QUALITY

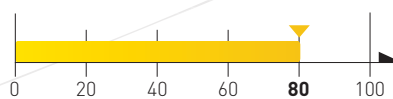
**Blackness**  
Macbeth D19C



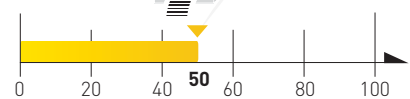
**0°Barcode**



**Sharpness**

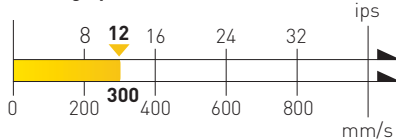


**90°Barcode**



## SENSITIVITY

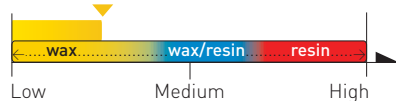
**Printing Speed**



**Receptor Compatibility**

Uncoated papers	■ ■
Coated papers	■ ■
High gloss papers	■
Synthetics	—

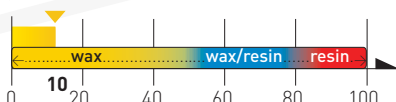
**Energy**



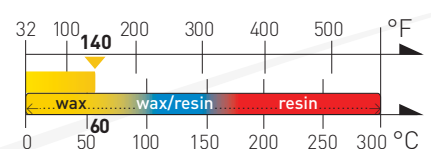
## RESISTANCES

**Mechanical Resistances**

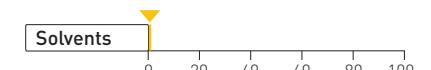
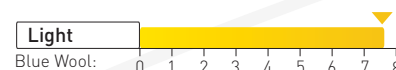
Crockmeter, 680 g/cm<sup>2</sup>, printout still visible after 200 cycles.



**Heat Resistance**



**Other Resistances**



Evaluation of observed performances of the ribbon with optimised printer settings and receptors (ARMOR procedure).

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## COLOUR RANGE

Data exposed in this sheet are for the black ribbon. Printing performance of the colour ribbons are close to black ones.



Black



Dark Blue  
(286 C)



Gold  
(874 C)



Light Red  
(1787 C)



Light Green  
(Green C)

## EXAMPLES OF APPLICATION FIELDS

The characteristics of AWR<sup>®</sup> 470 answer the requirements of the following application fields:  
(If your application is not among the ones below, please contact us.)



Inventory



Shipping



Pharmaceutical



Cosmetics



Flexible Packaging



Flexible Packaging for frozen applications



Flexible Packaging for hot processes



Retail labeling



Rating plates



Care labels



Signage & Logos



Laboratory



Healthcare



Tags



Food contact



Livestock



Outdoor applications



Conveyor sorting



Chemical drums



Automotive

## CERTIFICATIONS AND APPROVALS

**Food contact:** This ribbon is compliant with the European Directive 1935/2004/EC.

**Heavy metals:** The ribbon is compliant with EC 95/638. SGS reports available upon request.

**RoHS/WEEE:** EC directives 2002/95 and 2002/96, compliance to the limitation of dangerous substances in electric and electronic equipments.

**REACH:** As a European manufacturer, ARMOR is completely fulfilling REACH requirements. Our ribbons are free from the Substances of Very High Concern (SVHC).

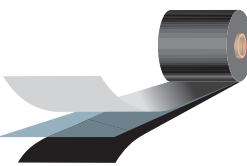
**TSCA:** The ribbon does not contain any substance of this list.

**CP65:** The ribbon is free from the substances listed except carbon black.

Contact us for all other regulations linked to product compliance with toxicity, treatment of wastes, banned components, packaging, etc.

## RIBBON SPECIFICATIONS

Backcoating →  
PET film →  
Ink layer(s) →



**Backcoating:**  
Silicon based.  
Friction coefficient:  $K_d < 0.2$ .

**PET film:**  
Thickness: 4.5  $\mu\text{m}$ .  
Tearing resistance:  $> 300 \text{ N/mm}^2$ (MD).

**Ink:**  
Wax.  
Melting point: 65°C  
(ARMOR procedure).

**Ribbon:**  
Thickness (black):  $< 9 \mu\text{m}$ .  
The ribbon is anti static build-up treated.  
Storage: 12 months, 5-35°C (40-95°F),  
20-80 % Humidity Rate.

## SUSTAINABLE DEVELOPMENT

ARMOR evaluation of AWR<sup>®</sup>470: To be compared with our other grades.



SolFree<sup>®</sup> is a unique process developed by ARMOR enabling the usage of 0 solvents.

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

**DECAPLAN:**  
Sustainable development action plan based on 10 leading topics involving all profiles of the company.

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

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

**Quality, health, safety and environment certifications:**  
ISO 9001 : 2008, N°QUAL/2007/28312  
ISO 14001 : 2004, N°ENV/2007/28315  
OHSAS 18001 : 2007, N°SMS/2007/28316

**AFAQ 1000NR (means millennium):**  
Evaluation of companies' state of advancement in sustainable development. ARMOR, 1<sup>st</sup> company to reach "Exemplary" level.

