AWR® 470

STANDARD - WAX FOR FLAT HEAD

THERMAL TRANSFER RIBBONS

AWR® 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.

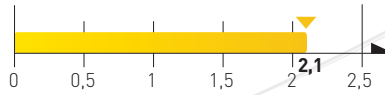Those characteristics remain at speeds up to 300 mm/s (12 ips) and with 200, 300 and 600 DPI printheads.

AWR® 470 grade features ARMOR's outstanding backcoat technology, ensuring excellent printhead protection, preventing clogging and static build-up.
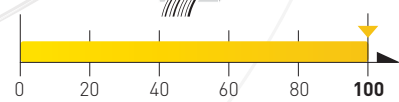
SolFree®
Solvent Free Process

▶ **PARTICULARLY ADAPTED TO ALL KINDS OF PAPER SUBSTRATES**

▶ **VERY GOOD SENSITIVITY**

▶ **EXCELLENT BLACKNESS**

PRINTING QUALITY

Blackness
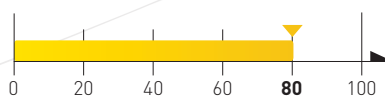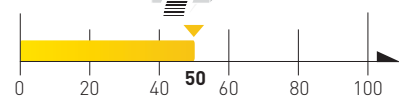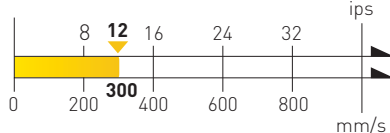Macbeth D19C — ODR
0   0,5   1   1,5   2 **2,1** 2,5

0°Barcode
0   20   40   60   80   **100**

Sharpness
0   20   40   60   **80**   100

90°Barcode
0   20   40   **50**   60   80   100

SENSITIVITY

Printing Speed
ips
8 **12** 16   24   32
0   200 **300** 400   600   800
mm/s

Energy
wax .... wax/resin   resin
Low   Medium   High
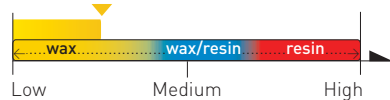
Receptor Compatibility

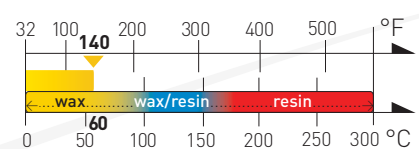|	
Uncoated papers	▮ ▮
Coated papers	▮ ▮
High gloss papers	▮
Synthetics	—

RESISTANCES

Mechanical Resistances
Crockmeter, 680 g/cm², printout still visible after 200 cycles.
wax .... wax/resin   resin
0 **10** 20   40   60   80   100

Heat Resistance
32 100 **140** 200   300   400   500   °F
wax ... wax/resin   resin
0   50 **60** 100 150   200   250 300 °C

Other Resistances

Light
Blue Wool: 0 1 2 3 4 5 6 7 8

Solvents
0   20   40   60   80   100

Water
Submerge: 0 20 40 60 80 100
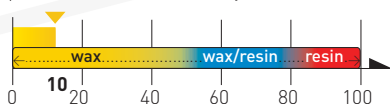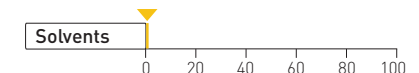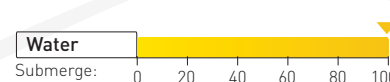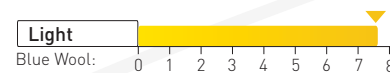
Evaluation of observed performances of the ribbon with optimised printer settings and receptors (ARMOR procedure).

AXR'9
AXR'8
AXR'7+
APX'FH
APR'6
AWX'FH
AWR'6
AWR®470

ARMOR
MAKING THERMAL TRANSFER EASIER

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FOR FLAT HEAD

THERMAL TRANSFER RIBBONS

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® 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

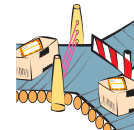Laboratory

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.

UL Approved: Legibility and durability of the printed label.

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).

CP65: The ribbon is free from the substances listed.
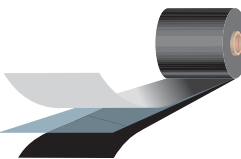
Halogen: this ribbon is halogen free.

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: Kd < 0.2.

PET film:
Thickness: 4.5 µm.
Tearing resistance: > 300 N/mm²(MD).

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

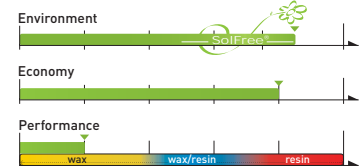**Ribbon:**
Thickness (black): < 9 µm.
The ribbon is anti static build-up treated.
Storage: 12 months, 5-35°C (40-95°F), 20-80 % Humidity Rate.

SUSTAINABLE DEVELOPMENT

ARMOR evaluation of AWR®470:
To be compared with our other grades.

Environment

Economy

Performance

wax — wax/resin — resin

SolFree® is a unique process developped by ARMOR enabling the usage of Ø 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, 1st company to reach "Exemplary" level.

PUB356

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