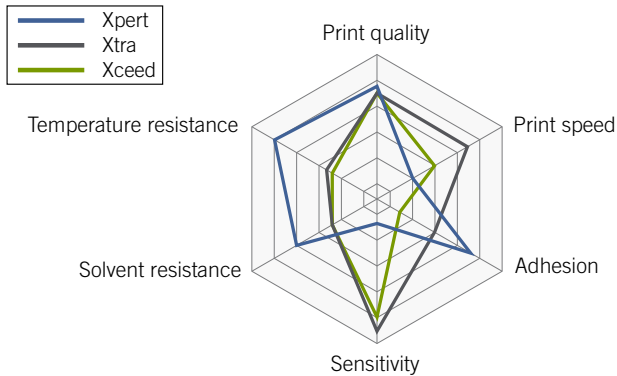


## AN ARRAY OF THERMAL TRANSFER RIBBON SOLUTIONS ■ ■ ■

Choose from three ribbon solutions to cover all your flexible packaging coding needs, whether basic or complex while guaranteeing you the best quality code, more production uptime and best-in-class Markem-Imaje service. All Markem-Imaje ribbons are designed, developed and tested with our SmartDate coders to offer you the best quality on the market.



### SmartDate Xpert Ribbons

SmartDate Xpert Ribbons are full resin ribbons intended for your most demanding applications that require high levels of resistance to solvents, oil and heat.



### SmartDate Xtra Ribbons

The SmartDate Xtra Ribbons raise the standards for thermal transfer coding. They offer a high level of versatility to code on most of your flexible packaging while ensuring durable codes from the production line until customer purchase.








### SmartDate Xceed Ribbons

SmartDate Xceed Ribbons are the most cost-effective ribbons to secure your code, ensure readability and make the most of your SmartDate coders without compromising on quality.



## RIBBON DISPOSAL

Component	 Re-usable	 Recyclable	 Incinerable	 Common Industrial Waste
TT Film	-	-	✓	✓
Plastic core	✓ as take-up core	✓ with same plastic type 	✓	✓
Roll packaging film	-	✓ with same type of plastics	✓	✓
Roll label	-	-	✓	✓
Cardboard box	✓	✓ with cardboard	✓	✓
Box label	-	-	✓	✓
Overpacking box	✓	✓ with cardboard	✓	✓
Pallet	✓	✓	✓	✓

## CERTIFICATIONS\*

- ▶ Food contact: 1935/2004/EC and FDA.
- ▶ Heavy metals: 2011/65/EC (RoHS).
- ▶ REACH: Ribbons are free from the Substances of Very High Concern (SVHC).
- ▶ California Proposition 65.

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

\* depending on grades

## STORAGE AND USE

- ▶ Storage: 5-35 °C (40-95 °F), 20-80% humidity rate.  
No shelf life in normal recommended storage conditions.
- ▶ Conditions of use:  
Do not open with a blade.  
Do not exert pressure on ribbon roll.  
Before use, we recommend storing the ribbon at average temperature (20 °C) for 24 h.

## SMARTDATE CODER COMPATIBILITY CHART

		SmartDate Xceed Ribbons			SmartDate Xtra Ribbons		SmartDate Xpert Ribbons		
		Black	White	Colours	Black	Metallic white	Black	White	Colors
<b>SmartDate 2</b> Width (mm): 22 to 55	Length (m)	600	"-"	450	700	600	600	450	600
<b>SmartDate 3 / 5 / X40 / X60</b> Width (mm): 22 to 55	Length (m)	900	650	800	1100	800	800	650	600
<b>SmartDate X60-128 / SD5-128</b> Width (mm): 90 to 130	Length (m)	600	600	600	900	600	600	450	450
<b>8018</b> Width (mm) : 22 and 33	Length (m)	500	300	400	550	400	400	400	400

We reserve the right to amend the design and/or specifications of our products without notice.

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## XTRA DURABLE ■ ■ ■

From the time you produce until your product reaches the shelf, the code will remain legible, including 1D and 2D barcodes.

### 25%\* MORE RESISTANT DURING PRODUCTION

Whether your production process and application is in a dry, humid, hot or cold environment, the code will adhere and withstand harsh environmental conditions.

### 25%\* MORE RESISTANT DURING TRANSPORTATION

While your products tend to shift and suffer from friction during transport, the code on your product will remain perfectly legible.

## XTRA CONVENIENT ■ ■ ■

ONE ribbon grade for your flexible packaging.

### REDUCED COSTS

One ribbon grade will reduce your inventory and logistics costs.

### HIGH QUALITY CODING THAT WILL ENHANCE YOUR PACKAGING DESIGN

Text, logos and high-density graphics.

### REDUCED ERRORS

One ribbon grade for only one setup.



## XTRA PRODUCTIVITY ■ ■ ■

SmartDate Xtra Ribbons have been designed to help you be more productive and reduce TCO\*\* by optimizing costs while making the best of your SmartDate coders.

### HIGH SPEED CODING WITHOUT COMPROMISING ON LEGIBILITY

Thinner ribbon properties optimize energy use and allow for faster production rates.

### LESS PRODUCTION DOWNTIME

50-83%\*\*\* added roll length with better printing properties versus market standard ribbons. Fewer changes mean longer production run.

### LOWER MAINTENANCE COSTS

Printheads last longer since the ribbon requires less energy to print.

### MARKEM-IMAJE CERTIFIED

Make the best of your SmartDate coder and benefit from all product warranties.

### 100% COMPLIANT

Fit for even the most stringent health and food regulations.

### REDUCED COSTS, LESS WASTE

More prints on a longer roll means reduced TCO.

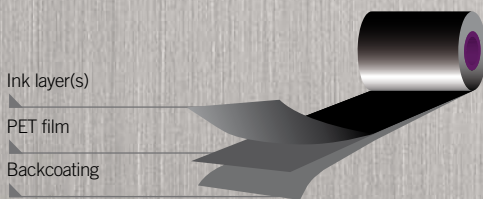
### A LONG TERM CHOICE

Multipurpose properties make it the right choice for future packaging needs.

\* Compared to other competitive standard ribbons.  
\*\*TCO: Total Cost of Ownership. \*\*\* 1100 m length for X40/X60 coders and 900 m length for the X60-128 coder versus 600 m market standard.

## RIBBON SPECIFICATIONS

- ▶ Ribbon length up to 1100 m.  
A variety of ribbons widths for all machine variants.
- ▶ Backcoating:  
Silicon based.  
Friction coefficient:  $K_d < 0.2$ .
- ▶ PET film:  
Thickness:  $4 \mu\text{m}$ .  
Tearing resistance:  $> 220 \text{ N/mm}^2$  (MD).
- ▶ Ink:  
Wax/Resin.  
Melting point:  $65 \text{ }^\circ\text{C}$   
(Manufacturer procedure).
- ▶ Ribbon:  
Thickness (black):  $< 7 \mu\text{m}$ .  
The ribbon is anti static build-up treated.



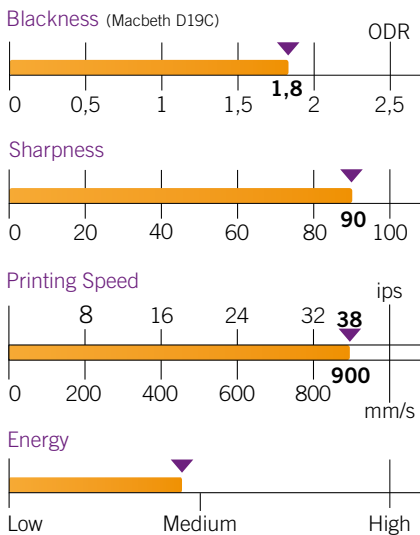
## CERTIFICATIONS

- ▶ Food contact: 1935/2004/EC and FDA.
  - ▶ Heavy metals: 2011/65/EC (RoHS).
  - ▶ REACH: Ribbons are free from the Substances of Very High Concern (SVHC).
  - ▶ California Proposition 65.
  - ▶ Halogen-free.
- Contact us for all other regulations linked to product compliance with toxicity, waste treatment, banned components, packaging, etc.

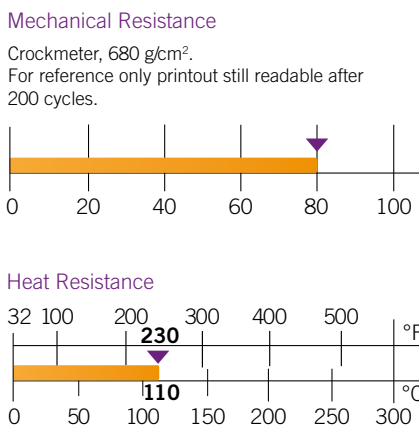
## STORAGE AND USE

- ▶ Storage:  $5\text{-}35 \text{ }^\circ\text{C}$  ( $40\text{-}95 \text{ }^\circ\text{F}$ ), 20-80% humidity rate.  
No shelf life in normal recommended storage conditions.
- ▶ Conditions of use:  
Do not open with a blade.  
Do not exert pressure on ribbon roll.  
Before use, we recommend storing the ribbon at average temperature ( $20 \text{ }^\circ\text{C}$ ) for 24 h.

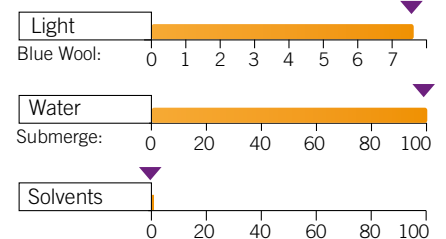
## PRINTING



## RESISTANCE



### Other Resistances



	Width	Length
<b>For SmartDate X40 / X60</b>	$\leq 55\text{mm}$	1100m
	$> 55 \text{ mm}$	900m

For legacy printers see family datasheet.

We reserve the right to amend the design and/or specifications of our products without notice.

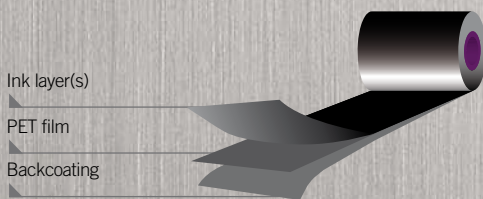
Markem-Imaje  
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## RIBBON SPECIFICATIONS

- ▶ Ribbon length up to 800 m.  
A variety of ribbons widths for all machine variants.
- ▶ Backcoating:  
Silicon based.  
Friction coefficient:  $K_d < 0.2$ .
- ▶ PET film:  
Thickness: 4,5  $\mu\text{m}$ .  
Tearing resistance:  $> 220 \text{ N/mm}^2$  (MD).
- ▶ Ink:  
Wax/Resin.  
Melting point: 85 °C  
(Manufacturer procedure).
- ▶ Ribbon:  
Thickness:  $< 8,5 \mu\text{m}$ .  
The ribbon is anti static build-up treated.



## CERTIFICATIONS

- ▶ Food contact: 1935/2004/EC and FDA.
- ▶ Heavy metals: 2011/65/EC (RoHS).
- ▶ REACH: Ribbons are free from the Substances of Very High Concern (SVHC).
- ▶ California Proposition 65.
- ▶ Halogen-free.

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

## STORAGE AND USE

- ▶ Storage: 5-35 °C (40-95 °F), 20-80% humidity rate.  
No shelf life in normal recommended storage conditions.

- ▶ Conditions of use:

Do not open with a blade.

Do not exert pressure on ribbon roll.

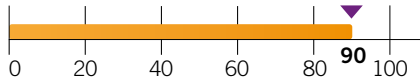
Before use, we recommend storing the ribbon at average temperature (20 °C) for 24 h.

## PRINTING

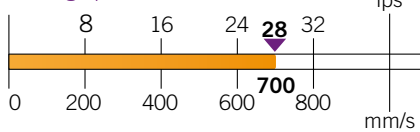
Pantone®

877 C

Sharpness



Printing Speed



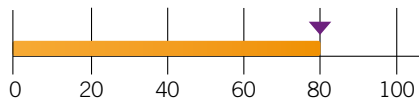
Energy



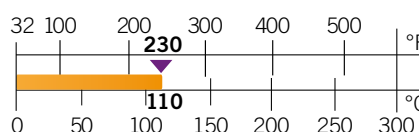
## RESISTANCE

Mechanical Resistance

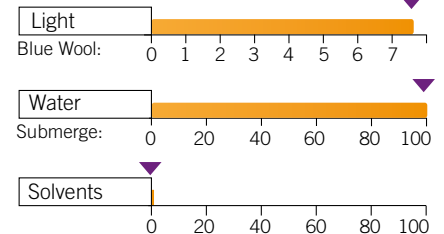
Crockmeter, 680 g/cm<sup>2</sup>.  
For reference only printout still readable after 200 cycles.



Heat Resistance



Other Resistances



	Width	Length
<b>For SmartDate X40 / X60</b>	≤ 55mm	800m
	> 55 mm	600m

For legacy printers see family datasheet.

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## SECURED PERFORMANCE ■ ■ ■

The most cost-effective way to ensure your products are securely coded and your barcodes are readable.

### DURABLE CODES

Resist smudges and scratches in your code with SmartDate Xceed Ribbons, available in various colors with a good level of contrast.

### IMPROVED CONTRAST FOR ENHANCED PACKAGING DESIGN

The 3410 OW ribbon is 10% whiter than other market brands for coding on dark flexible packaging.

## A CUTTING EDGE RIBBON ■ ■ ■

Take a step towards the latest generation of thermal transfer ribbons manufactured to the latest standards to offer you greater quality codes at the best price.

### MADE TO THE LATEST THERMAL TRANSFER STANDARDS

Benefit from the latest breakthroughs in thermal transfer coding. The SmartDate Xceed Ribbons are manufactured using the latest manufacturing processes and with ultimate optimization to offer you the most cost-effective thermal transfer solution.

### FULL HARDWARE COMPATIBILITY FOR MORE BENEFITS

Unlike wax ribbons, SmartDate Xceed Ribbons are cutting edge ribbons compatible with corner edge thermal heads, resulting in enhanced quality codes at higher speeds and in more demanding environments.



## MARKEM-IMAJE RENOWNED EXPERTISE AND SERVICE ■ ■ ■

Benefit from decades of expertise from the world's leading thermal transfer supplier.

### INCREASED UPTIME

Utilize the best ribbon-coder combination to ensure high production runs.

### BEST-IN-CLASS WARRANTY ON YOUR CODERS

Use SmartDate Xceed Ribbons and benefit from all SmartDate coder warranties, including the thermal head\*.



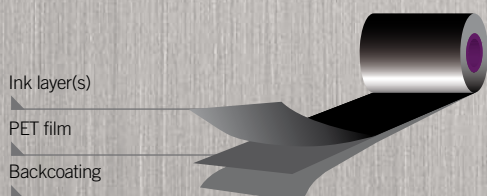
### QUALITY SERVICE WORLDWIDE

Gain direct access to one single point of contact for expert support on both your coder and ribbon.

\*See conditions defined by Markem-Imaje.

## RIBBON SPECIFICATIONS

- ▶ Ribbon length up to 800 m (depending on colors).  
A variety of ribbons widths for all machine variants.
- ▶ Backcoating:  
Silicon based.  
Friction coefficient:  $K_d < 0.2$ .
- ▶ PET film:  
Thickness: 4.5  $\mu\text{m}$ ; white: 4.0  $\mu\text{m}$ .  
Tearing resistance:  $> 220 \text{ N/mm}^2$  (MD).
- ▶ Ink:  
Wax/Resin.  
Melting point: 85 °C  
(Manufacturer procedure).
- ▶ Ribbon:  
Thickness:  $< 11 \mu\text{m}$ .  
The ribbon is anti static build-up treated.



## CERTIFICATIONS

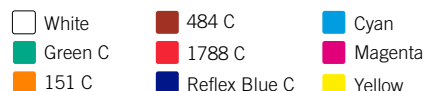
- ▶ Food contact: 1935/2004/EC and FDA (depending on colors).
  - ▶ Heavy metals: 2011/65/EC (RoHS).
  - ▶ REACH: Ribbons are free from the Substances of Very High Concern (SVHC).
  - ▶ California Proposition 65.
  - ▶ Halogen-free (depending on colours).
- Contact us for all other regulations linked to product compliance with toxicity, waste treatment, banned components, packaging, etc.

## STORAGE AND USE

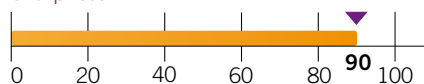
- ▶ Storage: 5-35 °C (40-95 °F), 20-80% humidity rate.  
No shelf life in normal recommended storage conditions.
- ▶ Conditions of use:  
Do not open with a blade.  
Do not exert pressure on ribbon roll.  
Before use, we recommend storing the ribbon at average temperature (20 °C) for 24 h.

## PRINTING

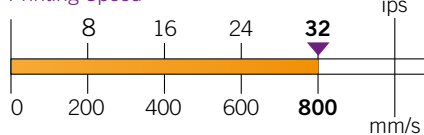
### Pantone®



### Sharpness



### Printing Speed



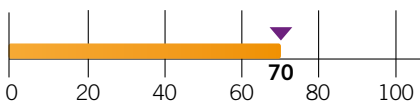
### Energy



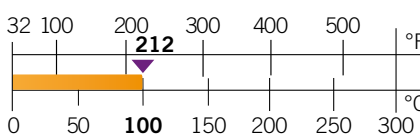
## RESISTANCE

### Mechanical Resistance

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

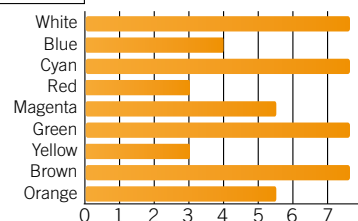


### Heat Resistance



### Other Resistances

#### Light fastness



#### Water

Submerge: 0 to 100

#### Solvents

0 to 100

	Width	Length
<b>For SmartDate X40 / X60</b>	$\leq 55\text{mm}$	650m:  800m:
	$> 55\text{mm}$	600m:

For legacy printers see family datasheet.

We reserve the right to amend the design and/or specifications of our products without notice.

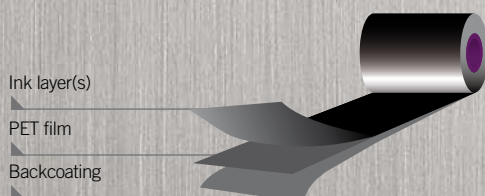
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## RIBBON SPECIFICATIONS

- ▶ Ribbon length up to 900 m.  
A variety of ribbons widths for all machine variants.
- ▶ Backcoating:  
Silicon based.  
Friction coefficient:  $K_d < 0.2$ .
- ▶ PET film:  
Thickness: 4,5  $\mu\text{m}$ .  
Tearing resistance:  $> 220 \text{ N/mm}^2$  (MD).
- ▶ Ink:  
Wax/Resin.  
Melting point: 85 °C  
(Manufacturer procedure).
- ▶ Ribbon:  
Thickness (black):  $< 8 \mu\text{m}$ .  
The ribbon is anti static build-up treated.



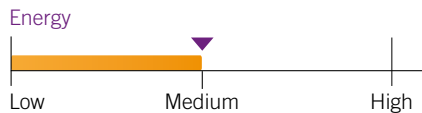
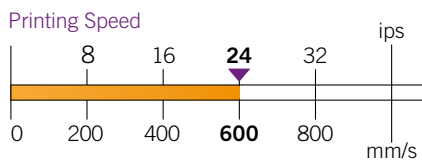
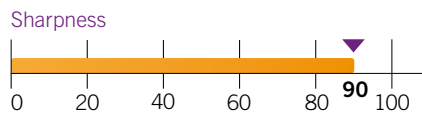
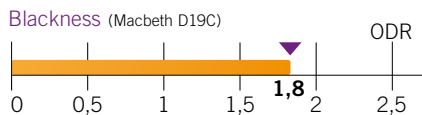
## CERTIFICATIONS

- ▶ Food contact: 1935/2004/EC and FDA.
  - ▶ Heavy metals: 2011/65/EC (RoHS).
  - ▶ REACH: Ribbons are free from the Substances of Very High Concern (SVHC).
  - ▶ California Proposition 65.
  - ▶ Halogen-free.
- Contact us for all other regulations linked to product compliance with toxicity, waste treatment, banned components, packaging, etc.

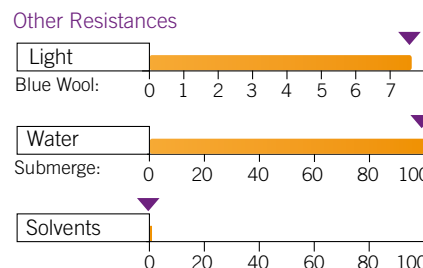
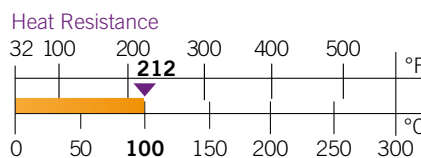
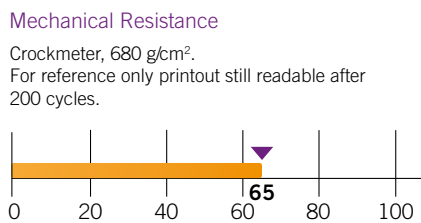
## STORAGE AND USE

- ▶ Storage: 5-35 °C (40-95 °F), 20-80% humidity rate.  
No shelf life in normal recommended storage conditions.
- ▶ Conditions of use:  
Do not open with a blade.  
Do not exert pressure on ribbon roll.  
Before use, we recommend storing the ribbon at average temperature (20 °C) for 24 h.

## PRINTING



## RESISTANCE



	Width	Length
<b>For SmartDate X40 / X60</b>	≤ 55mm	900m
	> 55 mm	600m

For legacy printers see family datasheet.

We reserve the right to amend the design and/or specifications of our products without notice.

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## XPERT RESISTANCE ■ ■ ■

SmartDate Xpert Ribbons offer the best rub resistance in the market, even in the most challenging applications.

### TRUE RESIN RIBBONS

Choose from three ribbon grades formulated specifically for your application needs. The code will withstand solvents, oil, abrasion and/or heat. It can resist extreme temperatures of up to 250 °C.



## XPERT PERFORMANCE ■ ■ ■

High definition codes at high speeds.

### HIGH QUALITY CODES TO ENHANCE PACKAGING DESIGN

Ensure ultra sharp text, logos and high density graphics including 2D codes.

### MAXIMIZE PRODUCT THROUGHPUT

Achieve speed up to 350 mm/second when used on the SmartDate X60.

### FLEXIBLE FOR FUTURE CODING NEEDS

Usable on all types of flexible packaging, SmartDate Xpert Ribbons are ideal for your evolving packaging needs.



## XPERT SOLUTION ■ ■ ■

Formulated and engineered to make the best of your SmartDate coders.

### MARKEM-IMAJE CERTIFIED

Make the best of your SmartDate coders and benefit from all product warranties\*.

### 100% COMPLIANT

Fit for even the most stringent health and food regulations.

### 100% SAFE

No specific care required for usage and manipulation, no operator protection needed.

### 100% COMPATIBLE WITH EQUIPMENT RIBBON SAVING MODE

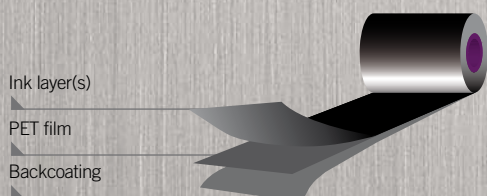
Optimized ribbon usage for less waste.



\*See conditions defined by Markem-ijaje.

## RIBBON SPECIFICATIONS

- ▶ Ribbon length up to 800 m.  
A variety of ribbons widths for all machine variants.
- ▶ Backcoating:  
Silicon based.  
Friction coefficient:  $K_d < 0.2$ .
- ▶ PET film:  
Thickness:  $4,5 \mu\text{m}$ .  
Tearing resistance:  $> 220 \text{ N/mm}^2$  (MD).
- ▶ Ink:  
Resin.  
Melting point:  $80 \text{ }^\circ\text{C}$   
(Manufacturer procedure).
- ▶ Ribbon:  
Thickness:  $< 9 \mu\text{m}$ .  
The ribbon is anti static build-up treated.



## CERTIFICATIONS

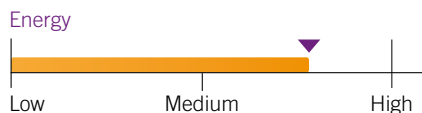
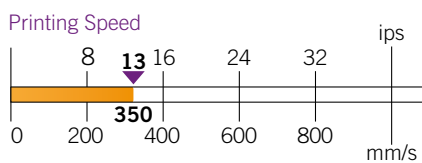
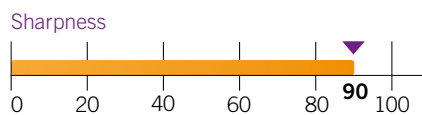
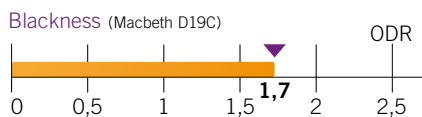
- ▶ Food contact: 1935/2004/EC and FDA.
- ▶ Heavy metals: 2011/65/EC (RoHS).
- ▶ REACH: Ribbons are free from the Substances of Very High Concern (SVHC).
- ▶ California Proposition 65.
- ▶ Halogen-free.

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

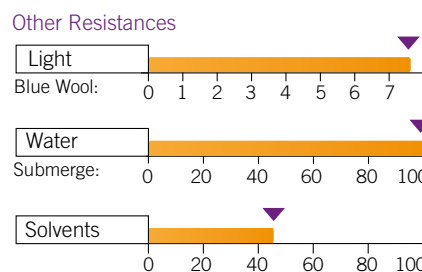
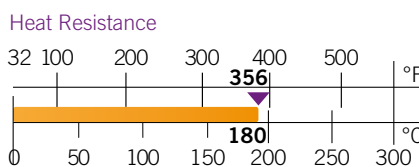
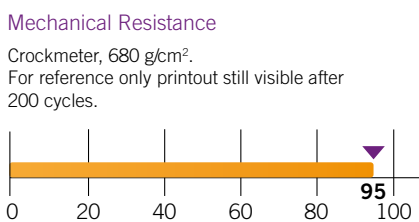
## STORAGE AND USE

- ▶ Storage:  $5\text{-}35 \text{ }^\circ\text{C}$  ( $40\text{-}95 \text{ }^\circ\text{F}$ ), 20-80% humidity rate.  
No shelf life in normal recommended storage conditions.
- ▶ Conditions of use:  
Do not open with a blade.  
Do not exert pressure on ribbon roll.  
Before use, we recommend storing the ribbon at average temperature ( $20 \text{ }^\circ\text{C}$ ) for 24 h.

## PRINTING



## RESISTANCE



	Width	Length
<b>For SmartDate X40 / X60</b>	$\leq 55\text{mm}$	800m
	$> 55 \text{ mm}$	600m

For legacy printers see family datasheet.

We reserve the right to amend the design and/or specifications of our products without notice.

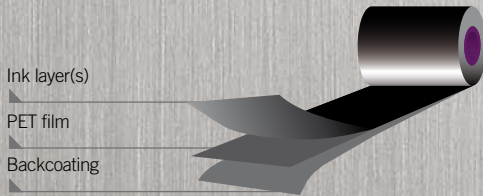
Markem-Imaje  
Global Sales & Marketing Division  
9, rue Gaspard Monge  
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26501 Bourg-lès-Valence Cedex – France  
Tél. : +33 (0) 4 75 75 55 00  
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## RIBBON SPECIFICATIONS

- ▶ Ribbon lengths up to 650 m (depending on colors).  
A variety of ribbons widths for all machine variants.
- ▶ Backcoating:  
Silicon based.  
Friction coefficient:  $K_d < 0.2$ .
- ▶ PET film:  
Thickness: 4,5  $\mu\text{m}$ .  
Tearing resistance:  $> 220 \text{ N/mm}^2$  (MD).
- ▶ Ink:  
Resin.  
Melting point: 85 °C  
(Manufacturer procedure).
- ▶ Ribbon:  
Thickness:  $< 11 \mu\text{m}$ .  
The ribbon is anti static build-up treated.



## CERTIFICATIONS

- ▶ Food contact: 1935/2004/EC and FDA.
  - ▶ Heavy metals: 2011/65/EC (RoHS).
  - ▶ REACH: Ribbons are free from the Substances of Very High Concern (SVHC).
  - ▶ California Proposition 65.
  - ▶ Halogen-free (depending on colors).
- Contact us for all other regulations linked to product compliance with toxicity, waste treatment, banned components, packaging, etc.

## STORAGE AND USE

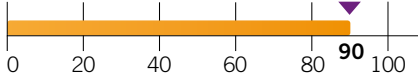
- ▶ Storage: 5-35 °C (40-95 °F), 20-80% humidity rate.  
No shelf life in normal recommended storage conditions.
- ▶ Conditions of use:  
Do not open with a blade.  
Do not exert pressure on ribbon roll.  
Before use, we recommend storing the ribbon at average temperature (20 °C) for 24 h.

## PRINTING

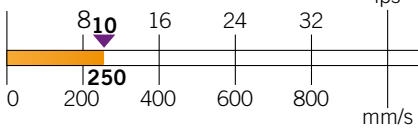
### Pantone®

- White
- Green C
- 286 C
- 192 C

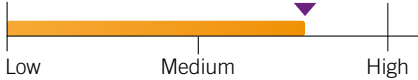
### Sharpness



### Printing Speed



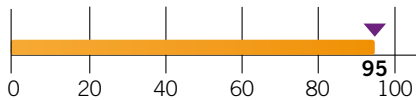
### Energy



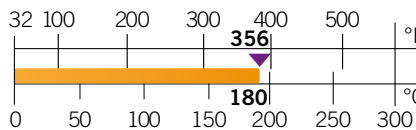
## RESISTANCE

### Mechanical Resistance

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

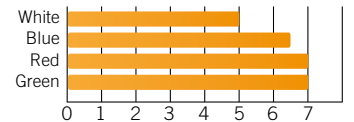


### Heat Resistance



### Other Resistances

#### Light fastness



#### Water

Submerge: 0 20 40 60 80 100

#### Solvents

0 20 40 60 80 100

	Width	Length
For SmartDate X40 / X60	≤ 55mm	600m:  650m:
	> 55 mm	450m:

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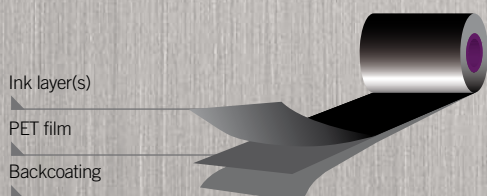
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## RIBBON SPECIFICATIONS

- ▶ Ribbon length up to 800 m.  
A variety of ribbons widths for all machine variants.
- ▶ Backcoating:  
Silicon based.  
Friction coefficient:  $K_d < 0.2$ .
- ▶ PET film:  
Thickness: 4,5  $\mu\text{m}$ .  
Tearing resistance:  $> 220 \text{ N/mm}^2$  (MD).
- ▶ Ink:  
Resin.  
Melting point: 85 °C  
(Manufacturer procedure).
- ▶ Ribbon:  
Thickness (black):  $< 8 \mu\text{m}$ .  
The ribbon is anti static build-up treated.



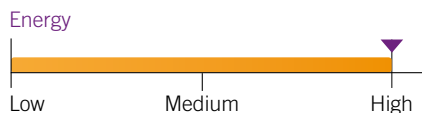
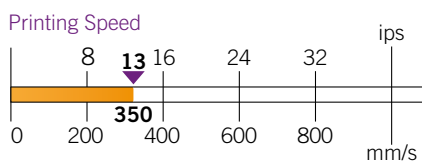
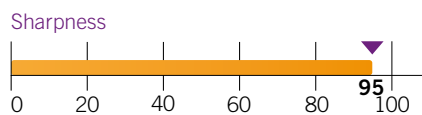
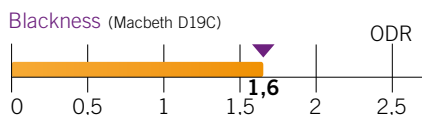
## CERTIFICATIONS

- ▶ Heavy metals: 2011/65/EC (RoHS).
  - ▶ REACH: Ribbons are free from the Substances of Very High Concern (SVHC).
  - ▶ California Proposition 65.
  - ▶ Halogen-free.
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## STORAGE AND USE

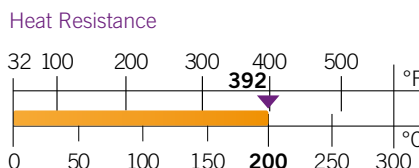
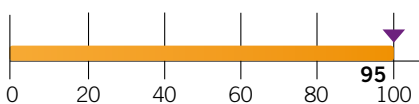
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## PRINTING

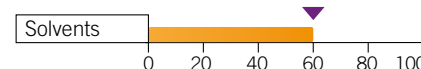
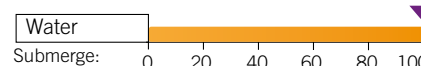


## RESISTANCE

**Mechanical Resistance**  
Crockmeter, 680 g/cm<sup>2</sup>.  
For reference only printout still visible after 200 cycles.



### Other Resistances



	Width	Length
<b>For SmartDate X40 / X60</b>	≤ 55mm	800m
	> 55 mm	600m

For legacy printers see family datasheet.

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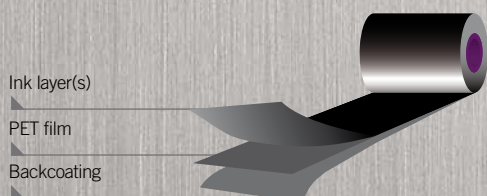
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- ▶ Ink:  
Resin.  
Melting point: 85 °C  
(Manufacturer procedure).
- ▶ Ribbon:  
Thickness (black):  $< 9 \mu\text{m}$ .  
The ribbon is anti static build-up treated.



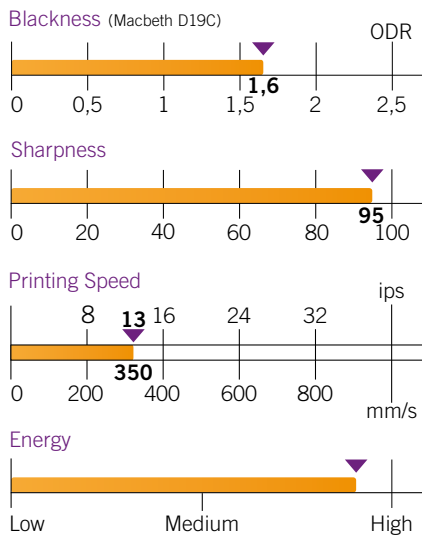
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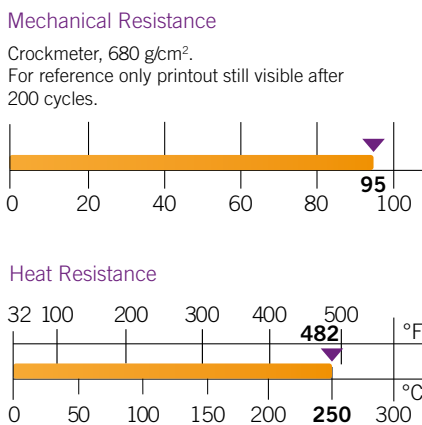
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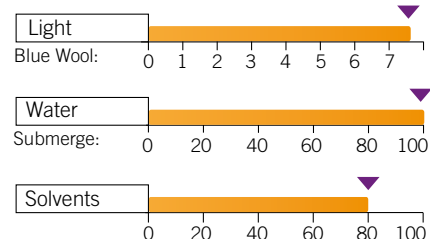
## PRINTING



## RESISTANCE



### Other Resistances



	Width	Length
<b>For SmartDate X40 / X60</b>	$\leq 55\text{mm}$	800m
	$> 55 \text{ mm}$	600m

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