



Top printing blanket facts.  
Why using the right blanket is key

**Rollin™** **vulcan®**

Trelleborg Printing Blankets. Ideas for the long run.





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# Ideas for the Long Run

## **What's in a blanket?**

### **Top Facts on Printing Blankets**

In this document we shall explore the effects of using different printing blankets on print quality and efficiency. In particular, we will look at the importance of using the correct printer blanket for the correct application and the physical properties required.

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For the purposes of this paper we will look at 3 separate categories of printing.

1. Commercial Web
2. Newspaper
3. Sheetfed



# 1. Commercial Web

**There are 6 areas of concern when considering printing blankets for heatset printing applications.**

## 1.1 Feeding and release

An inappropriate or **poor quality printing** blanket will inevitably lead to **paper wastage** in the feed and release stage. This is down to poor contact between paper and blanket and the paper becoming misaligned.

Using an inappropriate blanket can also lead to **double registrations**. Obviously, this **wastes paper, ink and time** as it produces an unusable product – so it is best avoided.

**Paper breaks** can also occur in the feed and release stage if the wrong blanket is used. So ultimately, there are a number of ways in which poor quality or inappropriate printing blankets can lead to **wastage of energy, resources and time leading to a reduction in productivity**.

Trelleborg develops their own rubber compounds to fit the required physical characteristics of all of their printing blankets and following rigorous testing have also relocated the compressible layer to cater for all heatset applications. Relocating this compressible layer gives the blanket durability and superior response to compression providing greater printing quality without paper breakages or double registration. Via the engineering and testing process of the top surface compounds the likelihood of these problems occurring is further reduced by the blanket offering perfect grip and release of the printing surface.

## 1.2 Ink or paper build up

Printing blankets can suffer from **gauge loss** over time and this can lead to **ink or paper build up** on the blanket. This leads to the printing of unusable product and therefore more **unnecessary print cycles and wasted paper**. Another **cost implication** comes from the need to purchase cleaning chemicals.

The high quality materials and engineering that go into Trelleborg printing blankets mean better durability and greater smash resistance and recovery. This leads to less gauge loss over time avoiding the problems mentioned above. The properties of Trelleborg top surface compounds give perfect ink and water affinity and this also helps avoid build up.

### 1.3 Print quality

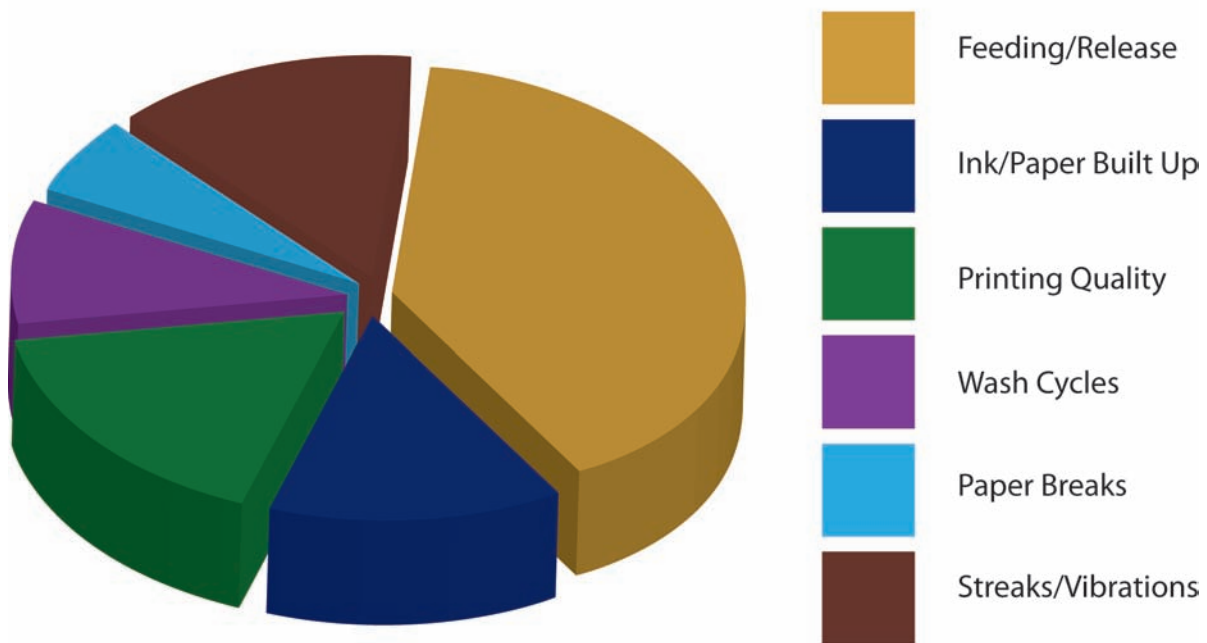
Low quality printing blankets lead to **low quality ink transfer. Poor dot reproduction and dot gain lead to wasted ink and excessively dark images.** For colour printing this will mean poor registration of colours.

Trelleborg virtually eradicate these problems by precisely engineering the properties of their printing blankets. Trelleborg's approach is to control the whole process of development, manufacturing and, crucially, testing their products to destruction. This has led to a world leading understanding of the long term performance of materials in the most demanding industrial environments.

### 1.4 Wash cycle

Wash cycles are inevitable but obviously represent **costly down time** whilst still **using valuable energy and paper.**

Trelleborg printing blankets keep wash cycles to a minimum because they clean up so well during printing cycles. This is because of attention paid to the surface chemistry of top layer compounds in the development process. As previously mentioned their superior durability means less gauge loss and therefore less ink and paper build up.



### 1.5 Paper breakage

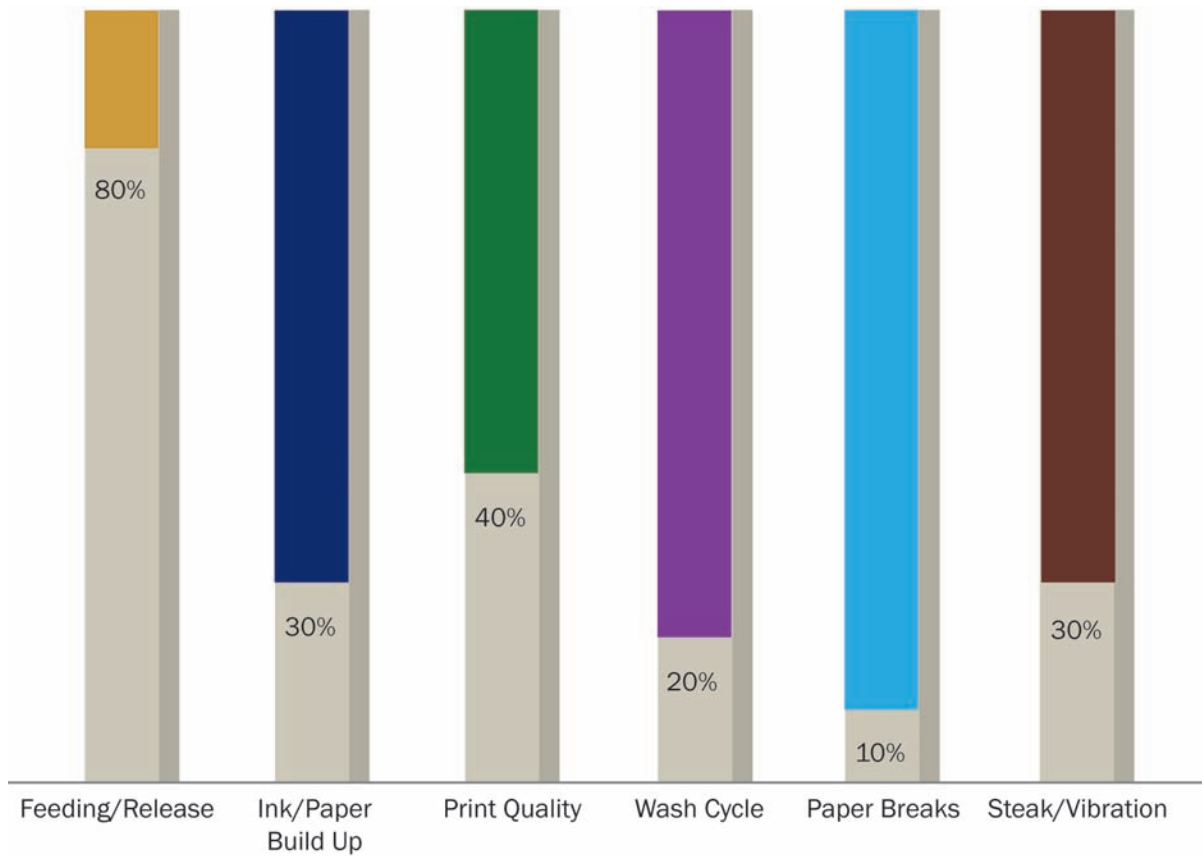
**Productivity** can be hit hard by **paper breakage** with some machines taking an hour to restart.

Trelleborg printing blankets maintain perfect tension in the paper due to the location of the compressible layer and the physical properties of the top layer.

### 1.6 Vibration and streak

**Vibration and streak** can be a problem in older machines.

The Trelleborg range includes blankets especially designed for older machines. These products have the “reboundability” to minimise vibration and streak.



# 2. Newspaper

Here we will highlight 5 areas directly relevant to the choice of printing blanket for coldset printing applications.

## 2.1 Feeding and release

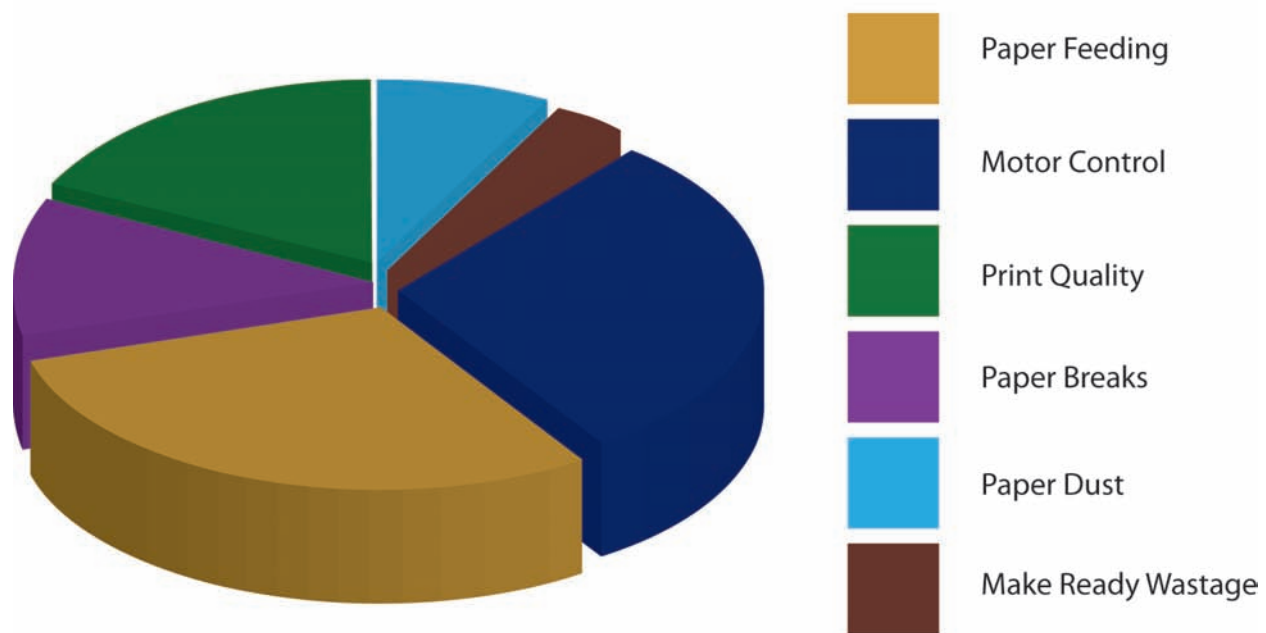
Feeding and release in coldset printing is a crucial area for printing blanket performance as this process carries a high risk of **registration doubling and paper breakage**.

Trelleborg printing blankets have been developed and tested specifically to mitigate these risks. The physical performance achieved by optimal positioning of the compressible layer keeps the paper under just the right tension. The top surface compounds used offer superior grip and release.

## 2.2 Print Quality

Printing blanket quality and print quality are inextricably linked and coldset printing is no exception. **Problems such as poor dot reproduction, low quality ink transfer and poor registration of colours** are all directly associated with printing blanket quality.

Trelleborg printing blankets have a unique carcass structure that retains the integrity and performance of the product through many millions of impressions. This and the chemical properties of the top layer keep printing quality high throughout the long lifetime of the blanket.





### 2.3 Paper dust or piling

This problem affects **print quality** as paper **dust builds up** on the blanket.

Trelleborg printing blankets have the surface properties to minimise this issue giving better print quality for longer.

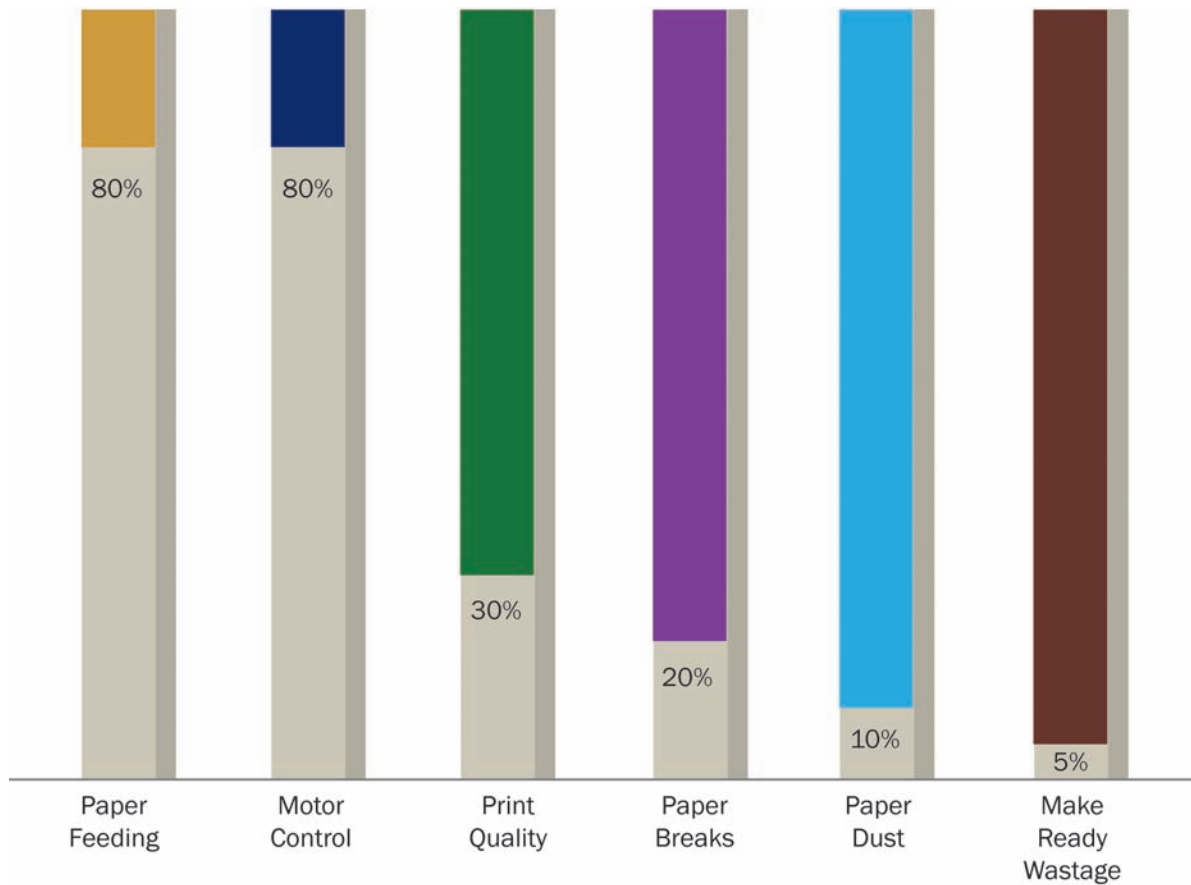
### 2.4 Make ready wastage

The all round capabilities of Trelleborg printing blankets gives them the ability to reduce energy wastage while the machine is warming up.

### 2.5 Paper breakage

With the productivity implications of **paper breakage** it is obviously something to avoid. The coldset printing process carries a high risk of this occurring and choosing the right blanket is an important factor.

The relationship between the printing blanket and the paper is important. Trelleborg blankets are engineered to maintain optimal tension in the paper and just the right amount of grip.



# 3. Sheetfed

UV inks offer a unique set of challenges to the printer and the printing blanket.

## 3.1 UV inks

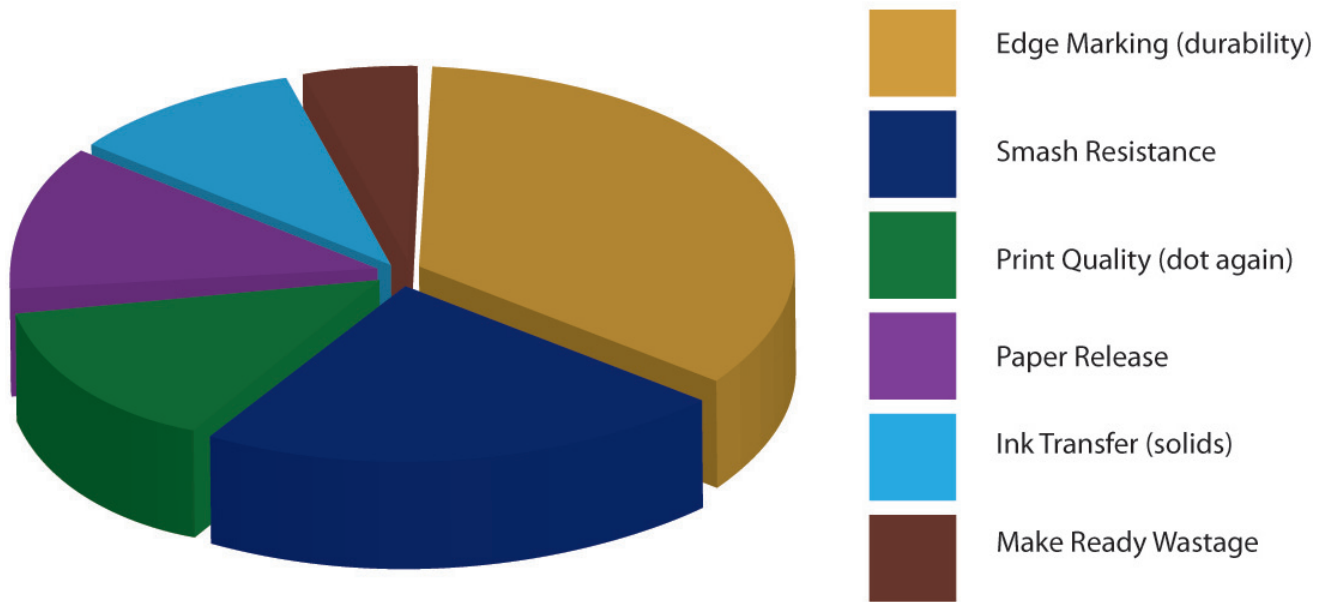
Over time UV inks permeate the blanket and affect its performance. **Dot gain and other print quality issues** are also common.

The Trelleborg range includes printing blankets specially designed for use with UV inks. The top layer is engineered to resist permeation by the ink and maintain performance over a long lifetime. Trelleborg UV printing blankets feature excellent ink transfer and release.

## 3.2 UV washes

**Washing solvents can also damage the printing blanket surface over time.** High quality blankets that can tolerate a wide range of chemicals are a must.

Trelleborg's approach to product development and rigorous testing has produced different top surfaces with remarkable resistance to polar or non-polar solvent washes.

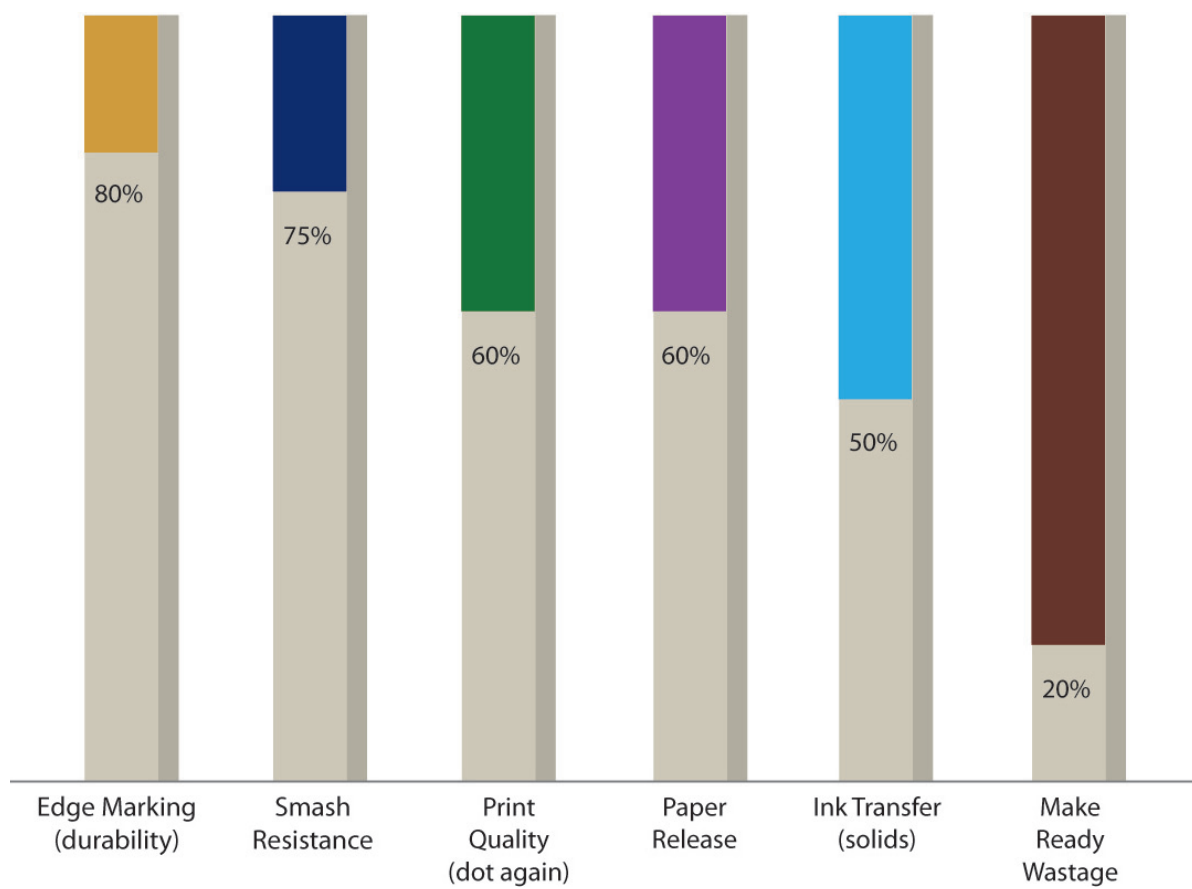


**This specialist application requires a specialist printing blanket.**

### 3.3 Printing substrate

This type of printing uses relatively thick and complex substrates. This places great and unusual stresses on the printing blanket.

Trelleborg's dedicated blanket for packaging combines smash resistance and compressibility to give an ultra durable product. This blanket is designed with versatility in mind and can be used on a wide range of packaging substrates.





**TRELLEBORG**

email: [printing@trelleborg.com](mailto:printing@trelleborg.com)  
website: [www.trelleborg.com/printing](http://www.trelleborg.com/printing)