



**MURAKAMI**

2015

*MURAKAMI presents*

## **Smartmesh** & MURAKAMI Emulsions

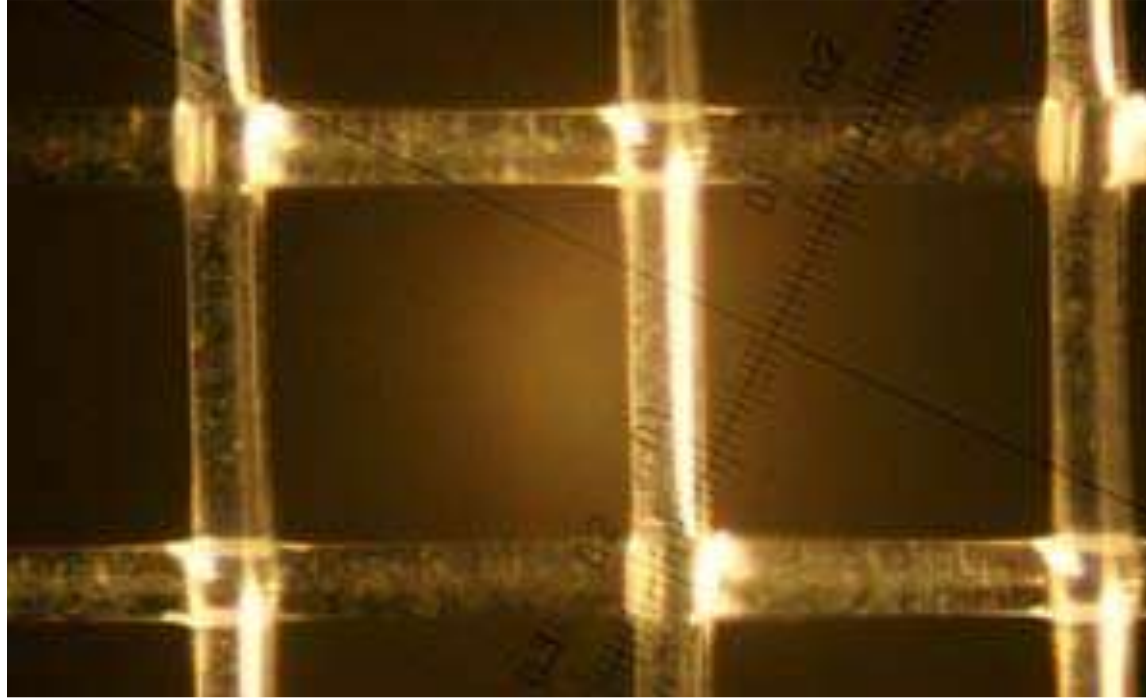
**How to achieve better production quality and profits**

*Advanced Threads / Precision-Woven Screen Fabrics*

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**Smartmesh**

## S-Mesh from Murakami



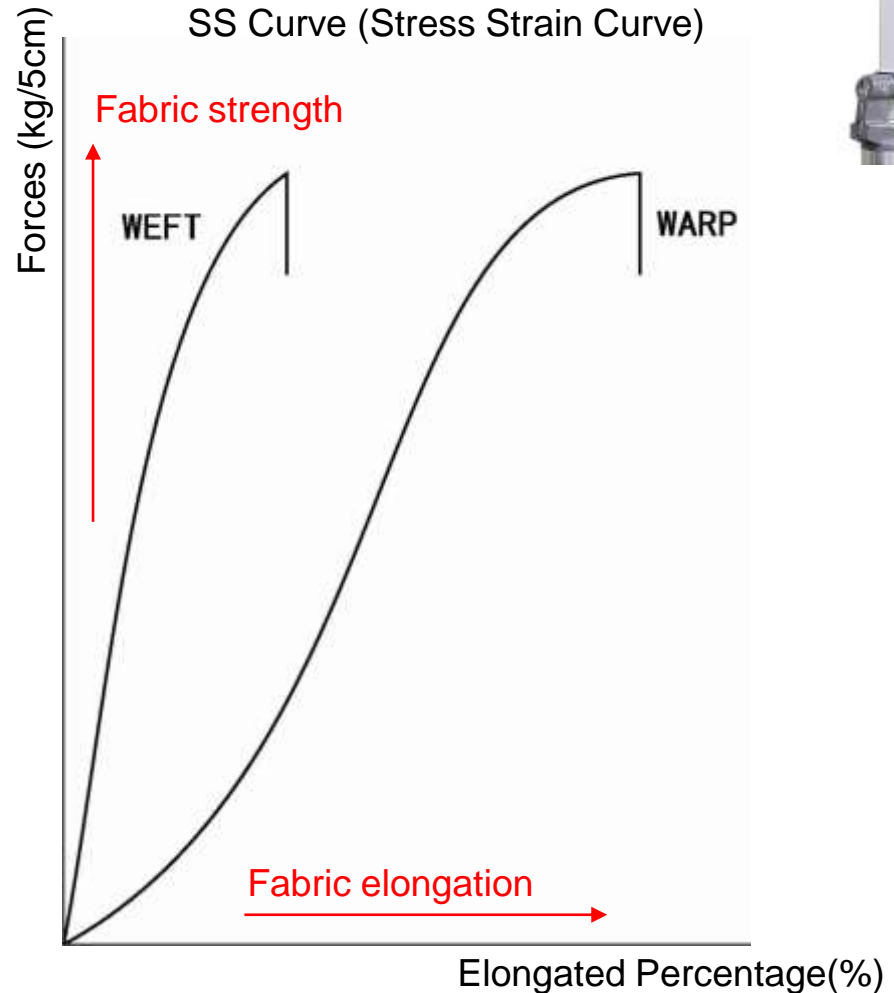
The photo above is one key to using far less ink and yet achieve incredible opacity and print quality.

Murakami S Mesh and Murakami Emulsions will help you achieve non-stop production, the key to better profits

# Measuring SS Curve

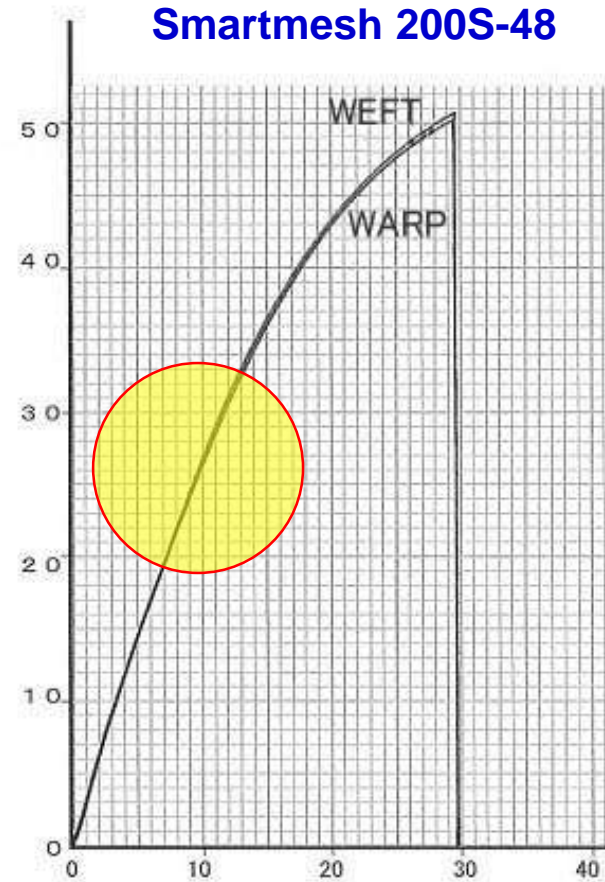
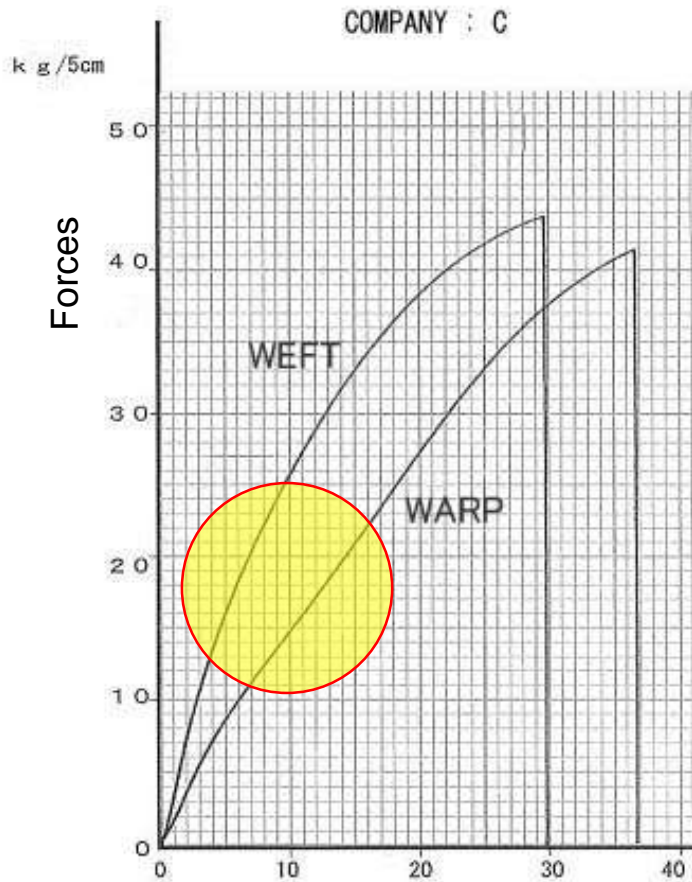
*Stress Strain (SS) test is performed on both warp and weft directions. Testing provides the relationship between elongation % and loaded forces.*

*More gaps in graphs between warp and weft indicate that the woven mesh tends to behave differently during stretching or printing process.*



# Elongation & Stretching Forces

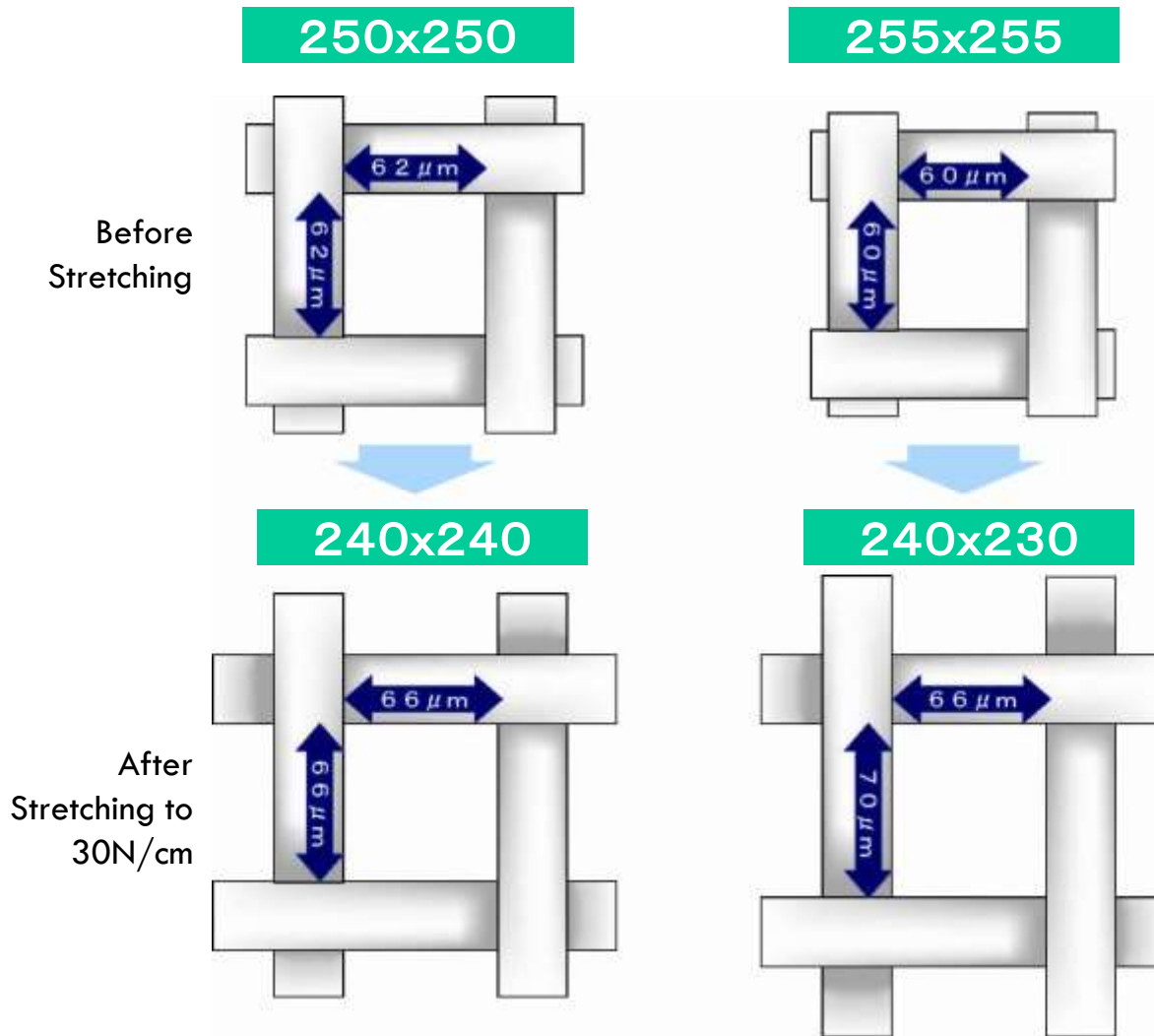
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Elongated Percentage

(%)

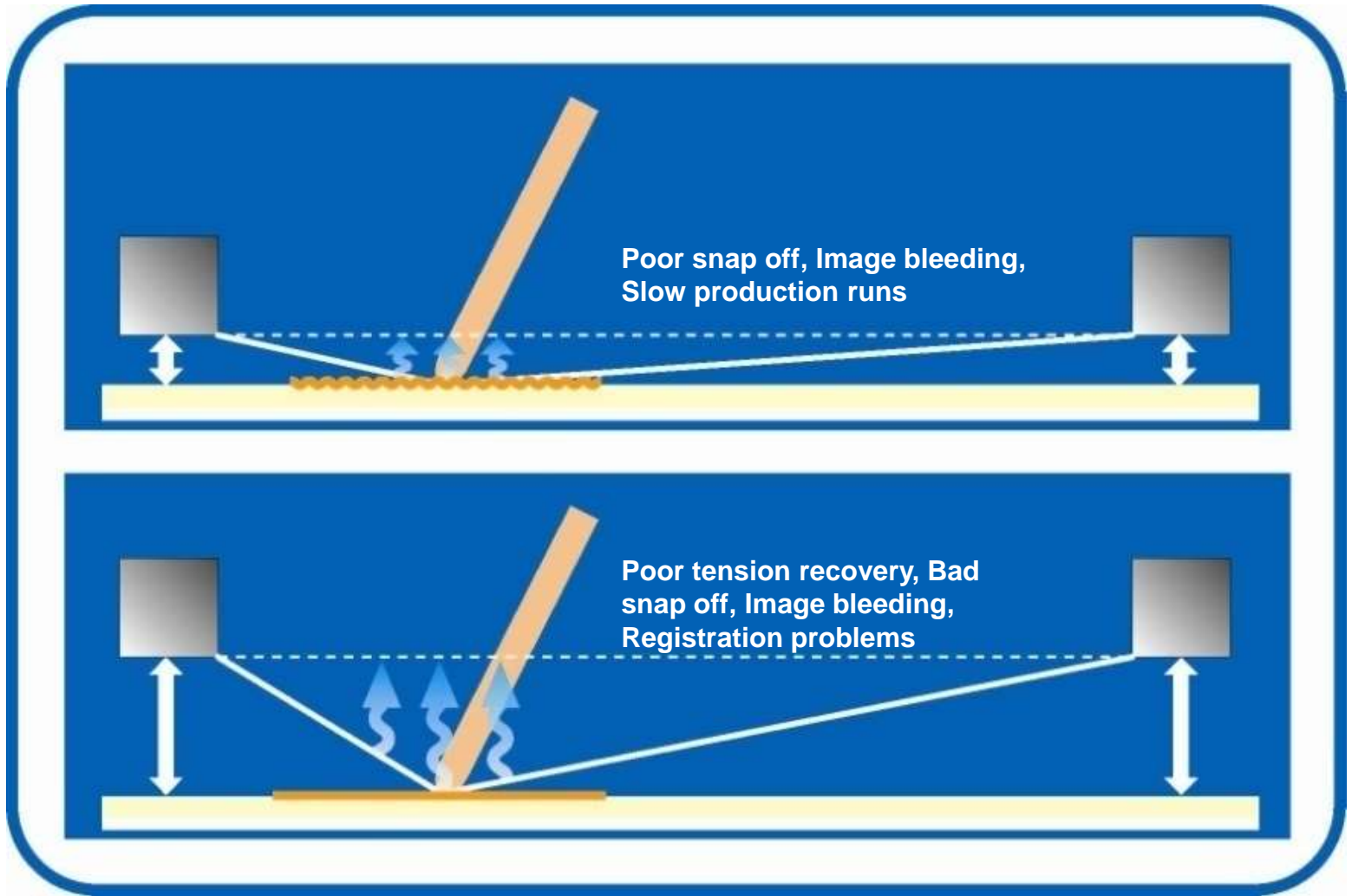
# Stretched Mesh Count & Mesh Openings(250T-40 $\mu$ m)



*Uneven mesh count on warp and weft after stretching may cause mesh interference with images. SMARTMESH elongates proportionally in warp and weft directions assuring square openings.*

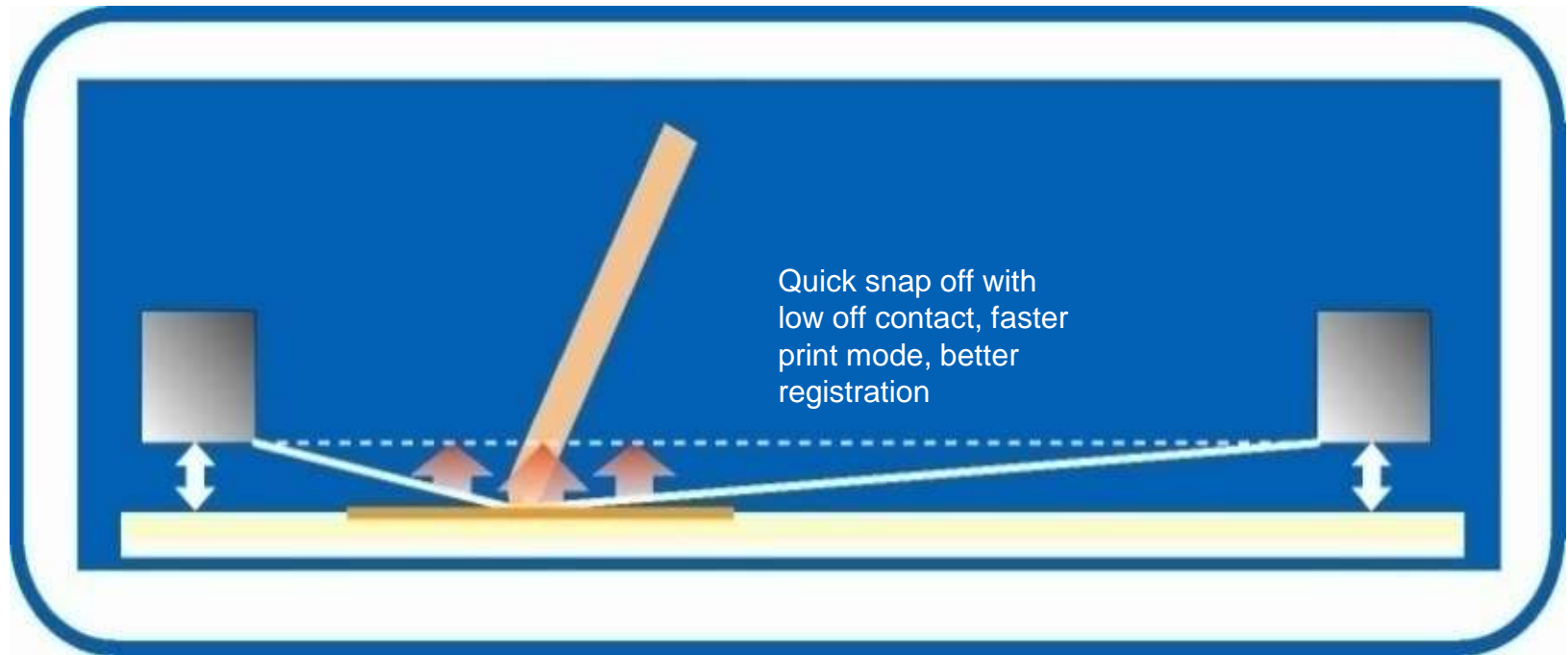
# Tension & Off contact - 1

*Low Tension & High Elongation Mesh*



# Tension & Off contact - 2

*Low Elongation & High Tension Mesh*



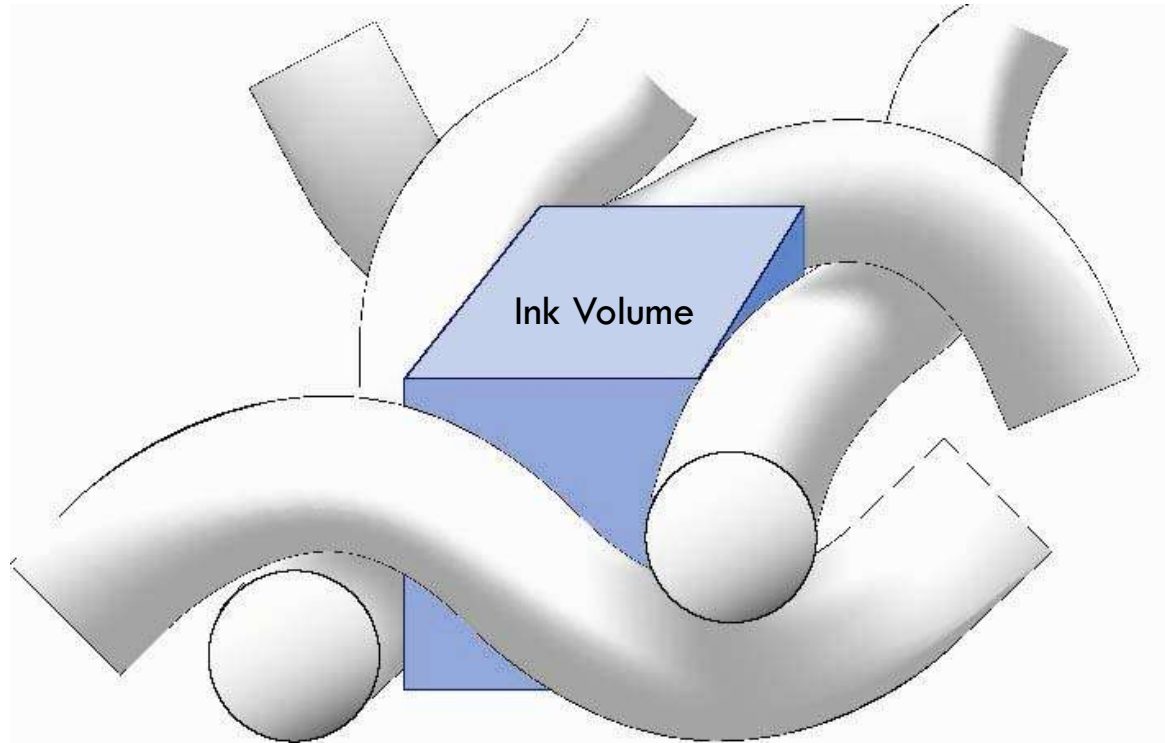
*Often high tension is a buzz word for many printers. But a low elongation % is another important aspect. Initial high tension yet increasing elongation % during printing will result in registration problems, image distortion, slower production run.*

# Quality Screens – Control Factors





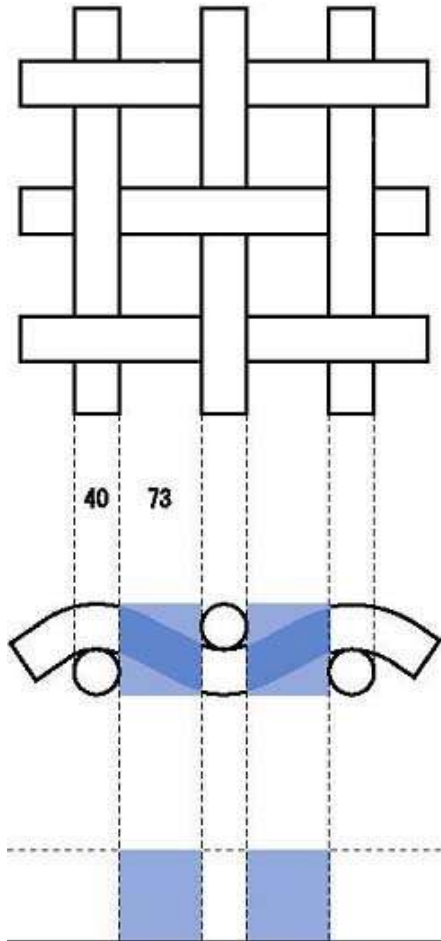
# Ink Volume (TIV)



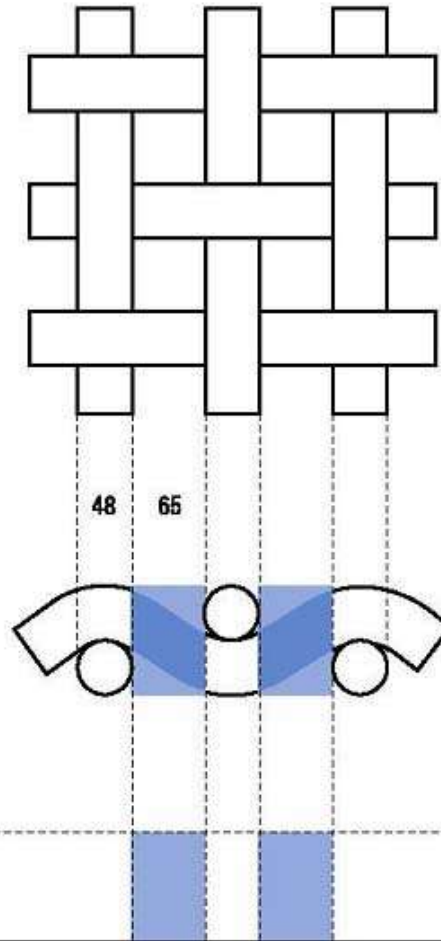
*Theoretical ink volume (TIV) is shown in the above diagram. Actual ink volume printed on substrates may vary depending on many variables such as mesh count & type, tension level, ink flow characteristics, substrates, off contact or printing speed and so on.*

# Relations- Ink volume & Thread diameter

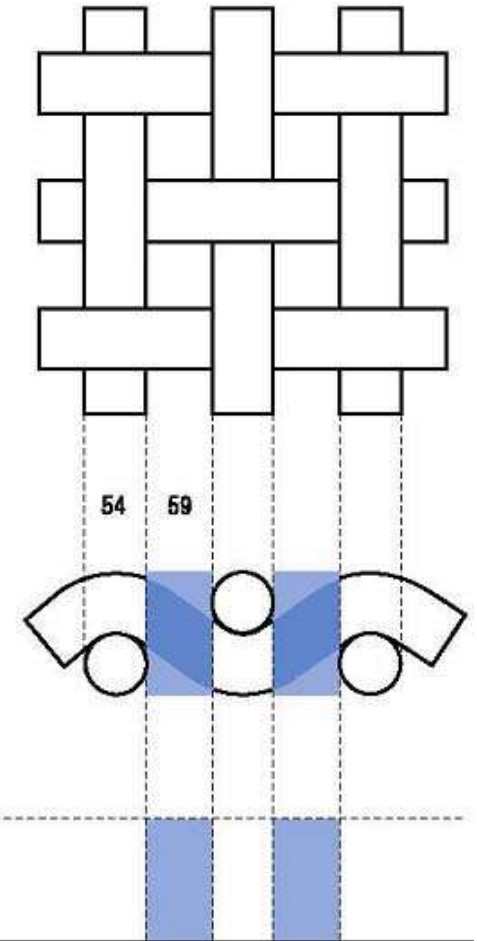
225-40 $\mu$



225-48 $\mu$



225-54 $\mu$



# Mesh Selection La selección de malla



Mesh Count (per inch)	Type	Diameter (micron)	M.O. (micron)	Open Area (%)	Thickness (micron)	Ink Vol. (cm <sup>3</sup> /m <sup>2</sup> )
36	T	250	597	50	485	241
40	T	200	435	47	380	179
60	T	120	303	51	205	105
<b>70</b>	<b>S</b>	<b>71</b>	<b>292</b>	<b>65</b>	<b>119</b>	<b>77</b>
<b>80</b>	<b>S</b>	<b>71</b>	<b>247</b>	<b>60</b>	<b>119</b>	<b>71</b>
86	T	100	195	44	165	73
<b>110</b>	<b>S</b>	<b>71</b>	<b>160</b>	<b>48</b>	<b>115</b>	<b>55</b>
110	T	80	151	43	140	60
125	T	71	132	42	122	51
135	T	54	134	51	88	45
<b>150</b>	<b>S</b>	<b>48</b>	<b>121</b>	<b>51</b>	<b>77</b>	<b>39</b>
150	T	54	115	46	84	39
<b>160</b>	<b>S</b>	<b>48</b>	<b>111</b>	<b>49</b>	<b>75</b>	<b>36</b>
160	T	54	105	44	84	37
<b>180</b>	<b>S</b>	<b>48</b>	<b>93</b>	<b>44</b>	<b>74</b>	<b>33</b>
180	T	54	87	38	82	31
<b>200</b>	<b>S</b>	<b>48</b>	<b>79</b>	<b>39</b>	<b>73</b>	<b>26</b>
<b>225</b>	<b>S</b>	<b>40</b>	<b>73</b>	<b>42</b>	<b>59</b>	<b>25</b>

# Selecting Emulsions - Selección de Emulsiones

## Aquasol TS, Aquasol HV, Aquasol HVP



Both are pure SBQ photopolymer emulsions with high solids content. Adding diazo to Aquasol TS, HV, HVP will enhance water resistance. Excellent for WB, Discharge and Plastisol



- Fast Exposing Emulsions
- Excellent choice for high volume shops who shoot many screens.
- Long shelf life = 1 year
- When diazo is added for water resisyncy shelf life = 4-6 weeks



Detailed discharge prints need strong stencils for non stop production

# Selecting Emulsions - Selección de Emulsiones

## SP-7500



**SP-7500 is a dual cure emulsion.**

**Dual cure emulsions have excellent exposure latitude, with a shelf life of 4-6 weeks once diazo is added.**

**SP-7500 is a great choice for simulated process and images halftones very well.**

**For water base and discharge apply Murakami MS Hardener or our A&B hardener for longer runs.**

**Originally developed for a major Disney screen printer to image simulated process printing for plastisol and water base inks.**



# Selecting Emulsions - Selección de Emulsiones

## SP-1400



**SP-1400 is a pure diazo emulsionE with a shelf life of 4-6weeks once diazo is added.**

**Excellent for all ink systems. Apply MS hardener or A&B hardener for water base discharge inks.**



**Excellent resolution and durability.**

**Requires longer exposure times than a pure photopolymer emulsion.**

# You make money when your press is printing!

**Non Stop printing is the key to success.**

**If you use Smartmesh from Murakami your prints will stay in register. No need to stop to adjust register or reshoot a screen that has lost tension.**

**S-Mesh will use 30-50% less base plate plastisol ink.**

**Discharge screens will keep the image area open and avoid stopping to wash screens.**

**Five minute stop equals 30 unprinted shirts!**

**Cinco minutos parada es igual a 30 sin camisetas!**



# You make money when your press is printing!

**Non Stop printing is the key to success.**

**Murakami emulsions will withstand long runs when exposed completely for all ink systems.**

**Combining Murakami Emulsion and Murakami Mesh will create a screen a perfect screen capable of Non Stop production.**

**Non-stop production of the highest quality prints possible is the key to profits and long term success.**

**Five minute stop equals 30 unprinted shirts!**

**Cinco minutos parada es igual a 30 sin camisetas!**





*Thank you for using Murakami Mesh and Emulsions*  
*Available from Frem Chemical in Guatemala*

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