GLASS SCREENPRINTING - AUTOMOTIVE
Saatilene Hi-Glass is an innovative high modulus, low elongation monofilament polyester screen printing fabric with a proprietary surface treatment, developed to meet the stringent requirements parameters of glass industry applications. Its excellent dimensional stability improves the printing registration, while its uniform mesh openings and fabric thickness produce controlled ink deposit.

<table>
<thead>
<tr>
<th>Range Name</th>
<th>Range Width (cm)</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BS 134-139,9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CS 155-161,9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DS 184-189,9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ES 210-215,9</td>
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<tr>
<td></td>
<td>FS 232-235,9</td>
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</tr>
<tr>
<td></td>
<td>GS 252-256,9</td>
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</tr>
<tr>
<td>PE AM 55.64 PW</td>
<td>X X X X X X</td>
<td>black-band</td>
</tr>
<tr>
<td>PE AM 62.64 PW</td>
<td>X X X X X X</td>
<td>black-band</td>
</tr>
<tr>
<td>PE AM 68.55 PW</td>
<td>X X X</td>
<td>black-band</td>
</tr>
<tr>
<td>PE AM 71.55 PW</td>
<td>X X X X X</td>
<td>black-band</td>
</tr>
<tr>
<td>PE AM 77.48 PW</td>
<td>X X X X X X</td>
<td>heat-grid / black-band</td>
</tr>
<tr>
<td>PE AM 77.55 PW</td>
<td>X X X X X</td>
<td>heat-grid / black-band</td>
</tr>
<tr>
<td>PE AM 90.40 PW</td>
<td>X X X X X</td>
<td>heat-grid / black-band</td>
</tr>
<tr>
<td>PE AM 90.48 PW</td>
<td>X X X X X X</td>
<td>heat-grid</td>
</tr>
<tr>
<td>PE AM 100.40 PW</td>
<td>X X X X X</td>
<td>heat-grid</td>
</tr>
<tr>
<td>PE AM 120.34 PW</td>
<td>X X X X X</td>
<td>heat-grid</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Article</th>
<th>Mesh count</th>
<th>Mesh count</th>
<th>Nominal thread diameter</th>
<th>Mesh opening</th>
<th>Open area</th>
<th>Fabric thickness</th>
<th>Theoretical ink volume</th>
<th>Specific cross-section</th>
<th>Maximum recommended tension from-to</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n/cm</td>
<td>n/inch</td>
<td>µm</td>
<td>µm</td>
<td>%</td>
<td>µm</td>
<td>cm²/m²</td>
<td>mm²/cm</td>
<td>N/cm</td>
</tr>
<tr>
<td>PE AM 55.64 PW</td>
<td>55</td>
<td>140</td>
<td>64</td>
<td>120</td>
<td>41</td>
<td>105</td>
<td>43</td>
<td>0,177</td>
<td>26-31</td>
</tr>
<tr>
<td>PE AM 62.64 PW</td>
<td>62</td>
<td>158</td>
<td>64</td>
<td>90</td>
<td>32</td>
<td>106</td>
<td>34</td>
<td>0,199</td>
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<td>68</td>
<td>173</td>
<td>55</td>
<td>89</td>
<td>36</td>
<td>89</td>
<td>32</td>
<td>0,161</td>
<td>25-30</td>
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<tr>
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<td>180</td>
<td>55</td>
<td>80</td>
<td>33</td>
<td>93</td>
<td>31</td>
<td>0,169</td>
<td>25-30</td>
</tr>
<tr>
<td>PE AM 77.48 PW</td>
<td>77</td>
<td>196</td>
<td>48</td>
<td>78</td>
<td>36</td>
<td>78</td>
<td>28</td>
<td>0,139</td>
<td>24-26</td>
</tr>
<tr>
<td>PE AM 77.55 PW</td>
<td>77</td>
<td>196</td>
<td>55</td>
<td>70</td>
<td>28</td>
<td>90</td>
<td>25</td>
<td>0,183</td>
<td>27-32</td>
</tr>
<tr>
<td>PE AM 90.40 PW</td>
<td>90</td>
<td>230</td>
<td>40</td>
<td>68</td>
<td>38</td>
<td>62</td>
<td>24</td>
<td>0,113</td>
<td>20-24</td>
</tr>
<tr>
<td>PE AM 100.40 PW</td>
<td>100</td>
<td>255</td>
<td>40</td>
<td>55</td>
<td>31</td>
<td>63</td>
<td>20</td>
<td>0,126</td>
<td>26-28</td>
</tr>
<tr>
<td>PE AM 120.34 PW</td>
<td>120</td>
<td>305</td>
<td>34</td>
<td>45</td>
<td>29</td>
<td>54</td>
<td>16</td>
<td>0,109</td>
<td>24-26</td>
</tr>
</tbody>
</table>

The above data are average values measured on piece-good in relaxed state, manufactured with yarns of a perfect nominal diameter (cfr. international standards), under normal hygrometric conditions (20°C=68°F, 65% relative humidity). They are subject to normal variations up to 7% if conditions vary from those stated above. The listed technical specifications, exception made for the thread diameter indicated with its nominal value, are referred to the arithmetic mean value of production samples and are subject to change, in accordance with our policy of continuously improving our products.

PW: Plain Weave (1:1).

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Defects are highlighted directly on the roll, in order to let the activity in the shop floor much easier, and documents will trace the main roll mesh parameters. This system will eliminate the risk to create screen with mesh defects, improving yield and customer satisfaction.
**SAATILENE VARIANT**

**Saatilene Variant** is a high modulus polyester mesh used in those applications where a different ink deposit is required, and it allows the printing process optimisation.

You can find here below the technical characteristics of the already existing types of **Saatilene Variant**; other items can be weaved and customized based on customer’s specific requests.

You have to consider a 5% tolerance in the mesh count per cm.

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<table>
<thead>
<tr>
<th>Zone</th>
<th>Measures in mm</th>
<th>Mesh per cm</th>
<th>Thread Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>900</td>
<td>90</td>
<td>48 μm</td>
</tr>
<tr>
<td>B</td>
<td>Lower than 10</td>
<td>Degradé</td>
<td>64 μm</td>
</tr>
<tr>
<td>C</td>
<td>260</td>
<td>48</td>
<td>80 μm</td>
</tr>
<tr>
<td>D</td>
<td>415</td>
<td>55</td>
<td>64 μm</td>
</tr>
<tr>
<td>Repeat</td>
<td>2260</td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Zone</th>
<th>Measures in mm</th>
<th>Mesh per cm</th>
<th>Thread Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>770</td>
<td>77</td>
<td>55 μm</td>
</tr>
<tr>
<td>B</td>
<td>Lower than 10</td>
<td>Degradé</td>
<td>64 μm</td>
</tr>
<tr>
<td>C</td>
<td>950</td>
<td>49</td>
<td>70 μm</td>
</tr>
<tr>
<td>Repeat</td>
<td>2680</td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Zone</th>
<th>Measures in mm</th>
<th>Mesh per cm</th>
<th>Thread Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>760</td>
<td>77</td>
<td>48 μm</td>
</tr>
<tr>
<td>B</td>
<td>Lower than 10</td>
<td>Degradé</td>
<td>64 μm</td>
</tr>
<tr>
<td>C</td>
<td>420</td>
<td>42</td>
<td>80 μm</td>
</tr>
<tr>
<td>D</td>
<td>545</td>
<td>60</td>
<td>64 μm</td>
</tr>
<tr>
<td>Repeat</td>
<td>2700</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zone</th>
<th>Measures in mm</th>
<th>Mesh per cm</th>
<th>Thread Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>870</td>
<td>77</td>
<td>48 μm</td>
</tr>
<tr>
<td>B</td>
<td>Lower than 10</td>
<td>Degradé</td>
<td>64 μm</td>
</tr>
<tr>
<td>C</td>
<td>415</td>
<td>42</td>
<td>80 μm</td>
</tr>
<tr>
<td>D</td>
<td>405</td>
<td>60</td>
<td>64 μm</td>
</tr>
<tr>
<td>Repeat</td>
<td>2520</td>
<td></td>
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</tbody>
</table>

**Variant 101** is 90 mesh per cm, 230 thread per inch, with 40 micron diameter in warp.
SAATI CHEMICALS AUTOMOTIVE GLASS PRINTING SOLUTIONS

EMULSIONS

VITRUM HU
BUILT-IN FEATURES SPECIALLY DESIGNED FOR GLASS PRINTERS
- Blue, high-resolution dual-cure emulsion
- Resistant to UV-cured, plastisol, solvent-based and water-based inks
- High solids content gives controlled stencil build-up
- Upon drying, lacks the tackiness typical of dual-cure emulsion—meaning less image distortion from vacuum blanket, less wear on stencil and squeegee and easier registration

VITRUM HHU
MAXIMUM RESISTANCE TO GLASS PRINTING INKS
- Blue, Pure Photopolymer emulsion
- Very high solids and high viscosity for optimum control of stencil thickness
- Water, solvent and abrasion resistant

SAATivit CTS3
FAST EXPOSING SCREEN EMULSION FOR GLASS PRINTING APPLICATIONS
- Blue pure photopolymer emulsion, requires no mixing
- Solvent and water resistant for use with solvent and oil based inks and resistant to solvents normally used for screen cleaning
- Approximately 15X faster than dual-cures and designed for use on medium and coarse mesh
- Designed specifically for use in printing automotive glass

SAATivit PHU2
FAST EXPOSING EMULSION HAVING AN OUTSTANDING RESISTANCE TO CO-SOLVENT INKS FOR GLASS PRINTING APPLICATIONS
- Red pure photopolymer emulsion, requires no mixing
- Outstanding abrasion and humidity resistance, particularly suitable to all glass ink co-solvent base used for architectural and automotive glass printing
- Excellent print definition thanks to its high solid content: 45%
- Suitable for CtS, including diodes exposure units

SAATigraf HS4
GENERAL INDUSTRIAL, DISPLAY GRAPHICS AND GLASS PRINTING APPLICATIONS
- Violet dual-cure direct emulsion for printing solvent-based and water-based inks
- Excellent print definition on any mesh
- High viscosity and fast exposure
- 42% solids content before sensitizer addition
- After wash-out the stencil is very hard and has low swell characteristics
- Water resistance can be increased using Fixer 9
- Mat surface gives HS4 an unique feature of printing properly on very smooth surface like glass and suitable to be used with positive made by inkjet printers.
INK REMOVERS

REMOVE IR15
UV AND SOLVENT BASED INKS DEGRADENT
- Developed for automatic cleaning washing machines
- No label required-Safe in use

REMOVE IR18
INK DEGRADENT FOR AUTOMATIC CLEANING
- Effectively cleans all types of ink
- Low foam and low odor suitable for manual and automatic cleaning
- Can be reapplied to remove ink stains
- Can be mixed with Remove ER6 and used as one-step ink and stencil remover

EMULSION REMOVERS

REMOVE ER6
READY-USE EMULSION REMOVER FOR MANUAL OR AUTOMATIC CLEANING
- Fast-acting, effective and economical
- Odor-free and biodegradable
- Contains built in degreaser to assist with ink removal
- Dilutes for dip tank use as one-step textile ink and stencil remover
- Mixes with Remove IR18 for one-step removal of stencil and UV cured or solvent based ink

REMOVE ER13
CONCENTRATED, EASY-TO-DISSOLVE LIQUID
- Mix 1 part with 50 parts water by weight (1 to 80 by volume)

FILM

DCF SUPER SHARP
- New concept of capillary film developed to meet the needs of industrial glass printing markets
- Red capillary film specially designed for the most demanding glass printing
- Highly solvent and abrasive resistance
- Enhanced sharpness for maximum image resolution and print definition
- Can be used with synthetic and stainless steel mesh

PRESS WASH

REMOVE PW7
THE MOST VERSATILE PRESS WASH
- Highly effective on all inks
- Use on-press between ink changes or when saving stencil
DEGREASERS

DIRECT PREP 2
FOR EACH SCREEN RECYCLING.
READY-TO-USE WETTING AGENT AND DEGREASER
- After initial fabric roughening, use with each reuse of synthetic monofilament mesh
- Use to prepare new multifilament and stainless steel mesh
- Dyed color ensures complete rinse from mesh
- Highly recommended for use with direct photopolymer emulsions
- Apply with a nylon or polyester brush

DIRECT PREP 3
THE ONLY CONCENTRATED POWERFUL CLEANER
AND EFFECTIVE WETTING AGENT AVAILABLE ON THE MARKET
- 10:1 concentrated liquid wetting agent and degreaser, can be used up to 40:1 in automatic spray systems
- New, more powerful cleaning action
- 100% biodegradable

ADHESIVES

ULTRAFIX SB3 PLUS WITH CATALYST
FAST-CURING, 2-PART, URETHANE-BASED
ADHESIVE WITH SUPERIOR RESISTANCE TO AGGRESSIVE SOLVENTS
- Remove frame from stretching system only minutes after applying
- Can be applied over old adhesive residue
- Superior resistance to solvents, heat and automatic cleaning machines
- Red, low-viscosity adhesive for fine-medium mesh counts

ULTRAFIX SB9 PLUS
- Two-components polyurethane adhesive
- Extraordinary initial adhesion allows to glue screen mesh also on untreated aluminum frames (sleek)
- Superior resistance to solvents and heat; ideal in automatic cleaning machine
- Ultrafix SB9 Plus is low viscosity adhesive for medium to fine fabrics mesh-counts.

BLOCKOUTS

FINISH S2
INCREASED FILLING POWER
- Blue, water-based liquid blockout
- Increased filling power and more resistance to breakdown in high-stress printing such as with cylinder presses
- For use with solvent-based, UV-cured, and plastisol ink
- Remove with water

FINISH W3
UNIQUE RECLAIMABLE,
WATER-BASED BLOCKOUT RESISTANT TO WATER AND SOLVENT
- Unlike other water-based blockouts, offers superior water resistance simply upon drying
- Resistant to water-based, UV-cured, solvent-based and co-solvent inks
- Very high solids content offers increased durability
- Can be removed with emulsion reclaiming chemicals and a pressure washer
EQUIPMENT AND SQUEEGEES

TOP 12

The Saati Top 12 Clamp system will provide optimum pneumatic screen tensioning to the Screens for screenprinting on glass.

This highly advanced, yet easy to use system achieves the highest recommended tensions more uniformly, without over-tensioning the corners. It provides high tension levels and dimensional stability of the screen.

Among the most notable features of this premier stretching system is its independent or simultaneous warp/weft tensioning capability, maintaining the perfect geometry of the fabric. A dedicated control panel will allow monodirectional tensioning.

In addition design pre-stresses the frame while simultaneously eliminating mesh contact with the frame surface during stretching. This specialized “non-contact” stretching eliminates any hazardous friction, uneven tensioning or resultant tears caused by stretching the mesh when it comes in contact with rough or uneven frame surfaces.

Last but not least, the Saati clamp system has extra safety features that ensure the safest working conditions for the operator.

DURALIFE SQUEEGEES

ME SERIES

DURALIFE ME
- Premium molded edge
- UV and abrasion resistant
- Extended press life
- Resists nicking
- Sealed walls resist solvent attack
- Custom sizes available

SINGLE/DUAL
Individual cavity molds assure consistent and uniform blade thickness, dimensions and hardness. Duralife’s molded blade maintains its print edge and resists nicking.
Duralife DUAL DURO reduce flexing and maintain a more consistent squeegee angle. Print with less pressure for longer stencil life.

CE SERIES

DURALIFE ME
- Premium cut edge, excellent re-sharpening
- Excellent UV and solvent performance
- Close tolerance on hardness range
- Good all around performance
- Available in all sizes

SINGLE/TRIPLE
Duralife’s precision cut-edge offers the optimal sharp edge yielding the finest in print definition. Unlike rotary cut edges that leave a serrated pattern, our one-stroke cut leaves a perfect print edge.

ANTISTATIC
Duralife ANTISTATIC has been developed to decrease static related printing problems, such as whiskering and dust attraction. Its special formulation helps reducing the squeegee sensitivity to electrostatic charges.

LOW SWELLING
HIGH ABRASION RESISTANCE
REDUCED ELECTRICAL CHARGE

www.saati.com