








Flame Resistant Embroidered Emblems

TekSpec®
Product technical details



-  Flame resistant
-  Industrial
-  Dry-clean
-  Heat seal
-  Sew-on
-  Hook and Loop
-  Removable

PRODUCT DETAILS

Emblem Dimensions:

- **Minimum** emblem size is **1.0" x 1.75"** (2.5cm x 4.4cm).
- **Maximum** emblem size is **11.5" x 13.25"** (29.2cm x 33.6cm).

Design Lettering Dimensions:

The text within a design should not be less than 4mm (0.16") in height. Smaller text may need to be altered to embroider slightly larger. For designs requiring a lot of small text, Woven Emblems or printed emblems may be a viable alternative.



FR Fabric - Type & Colours:

Nomex® : 7 colours.

Emblemtek uses Nomex® FR fabrics. Choose one (1) color from the Emblemtek Embroidered Flame Resistant Emblem Fabric and Thread Chart.

Embroidery Thread - Type & Colours:

Embroidered Flame Resistant Emblems can be produced with either Nomex® flame resistant embroidery threads or standard, non-FR rated 100% polyester embroidery threads.

Nomex® Flame Resistant Embroidery Thread:

24 colours to choose from. Maximum 15 colours per design**. Colours can be selected from the Emblemtek Embroidered Flame Resistant Emblem Fabric and Thread Chart.

100% Polyester Thread (not FR rated)*:

120 colours to choose from. Maximum 15 colours per design**. Colours can be selected from the Emblemtek Embroidered Emblem Thread Chart.

**While 100% polyester embroidery thread can be used to produce emblems, alone or in combination with Nomex® thread, these emblems would not be completely FR rated.*

***Emblems can have a maximum of 15 design colours of either thread type, or in combination.*

Backing Types:

5 options.

- FR rated hi-melt glue backing
- FR rated non-woven material (no-glue)
- FR rated hook-and-loop (black only)**
- Non-FR rated hook-and-loop (limited colours available)
- No backing

***Available in black only, FR rated hook-and-loop is a non-stock option available on request, and subject to possible supply-chain delays. Using this backing will require higher minimum emblem order quantities, and pricing will be much higher as compared to regular, non-FR rated hook-and-loop materials.*

Border / Edge Styles:

Merrowed border: Nomex® Flame Resistant Embroidery Thread or 100% Polyester Thread (not FR rated).

Embroidered Flame Resistant Emblems are manufactured with Merrowed borders only, a separately stitched over-lock edge. The ability to sew a Merrowed border onto an emblem is directly related to the emblem shape. Odd, intricate shapes may not be suitable for Merrow application. Choose one colour of thread for the Merrowed border from either the [Emblemtek Embroidered Flame Resistant Emblem Fabric and Thread Chart](#) or from the [Emblemtek Embroidered Emblem Thread Chart](#).

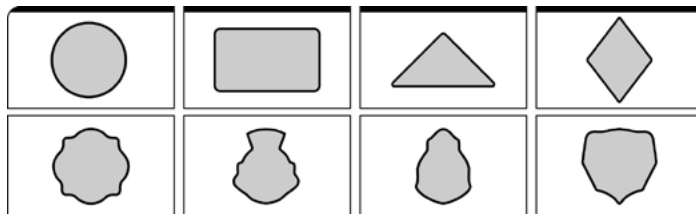


Merrow Border Limitations:

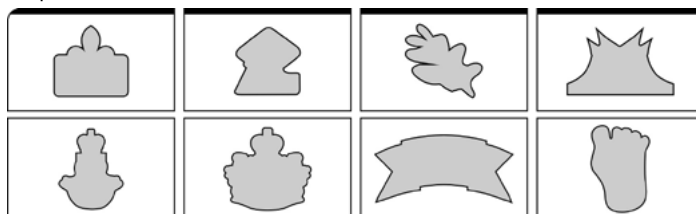
As noted above, Custom Embroidered Emblems are manufactured with merrowed borders. The edges of the emblem are guided through a surging, over-lock sewing machine by hand, and a heavy stitching is applied.

Shapes with edges that are completely open and "exterior" are more easily merrowed. However, odd, intricate shapes with edges that angle back towards the interior of the emblem, generally cannot be merrowed.

Shapes that can be merrowed



Shapes that cannot be merrowed



Images are not to size.

Design / Emblem Treatment Options:

Emblem treatment options such as **3D-puff** embroidery stitching or **double-sided** emblem are **not** available for Embroidered Flame Resistant Emblems.

Accessory Attachment Options:

Accessory options, such as button loops, snaps, rings, etc..., are **not** available for Embroidered Flame Resistant Emblems.

APPLICATION & WASH GUIDELINES

Application Methods







Sew-on or heat seal. The manner in which embroidered emblems can be attached to garments or other textile products relates directly to the type of backing used in the manufacturing process, the size of the emblems and the types of materials that the emblems will be attached to. Almost all emblems can be sewn on, and when it comes to heat seal application, smaller emblems are easier to work with. The chart below outlines the application options relative to backing types.

BACKING	HEAT SEAL APPLICATION			SEW ON	BY HAND
FR rated Hi-Melt Glue	385°F - 405°F (196°C - 207°C)	80 PSI (5.5 Bar)	15 - 20 seconds	✓	✗
FR rated Non-Woven Material (No Glue)		✗		✓	✗
FR rated Hook-and-Loop Non-FR rated Hook-and-Loop		✗		✗	✓

Heat Seal Notes & Tips

- Emblems should be heat sealed to the garment using a complete cycle time on both the front side and the back side of the garment and emblem. Emblems with heavier embroidery may require longer heat seal application cycle times beyond the ranges noted above.
- Thicker fabrics may require longer cycle times beyond the ranges noted above.
- Covering the emblem with a sheet of Teflon® or paper towel prior to the heat seal cycle may help to reduce a “crushing” affect, and may help to protect the garment from scorching.
- White materials (knits or blends) may scorch if heat seal temperatures are too high. It is recommended that fabrics be tested first.

Washing & Drying Guidelines

BACKING TYPE	WASH TYPE	WASH TEMPERATURE	DRY TYPE
FR rated Hi-Melt Glue	Industrial	Wash in commercial machine in water not exceeding 176°F (80°C) 	Tumble dry at medium heat not exceeding 150°F (65°C) 
FR rated Non-Woven Material (No Glue)	Industrial (Sew-On Application)	Wash in commercial machine in water not exceeding 200°F (93°C) 	Tumble dry at high heat not exceeding 167°F (75°C) 
FR rated Hook-and-Loop Non-FR rated Hook-and-Loop	Home Care	Wash gently by hand in water not exceeding 86°F (30°C) . 	NO machine dry 

It is recommended not to expose heat sealed emblems to wash or drying conditions exceeding **200°F (93°C)**. Emblems with Hook-and-Loop option should be exposed to hand washing only.

Sunlight / Ultraviolet Light:

Under normal working conditions the colour fastness of the Nomex® flame resistant embroidery threads is quite stable. However, dye colours will fade if exposed to prolonged and stationary periods of direct sunlight. The thread colours will react to the combinations of infrared, visible and ultraviolet light, as well as the radiant heat, generated by the sun.

ORDERING GUIDELINES

Artwork & Set-up Fees

No fees*. Emblemtek will provide artwork on new emblem orders for customer Approval prior to production. There are no artwork or set-up fees when existing, electronic or physical designs or samples are provided to Emblemtek. Artwork fees may apply when designs are created from scratch.

Custom Fabrics:

Customers wishing to supply their own fabrics may do so for orders greater than 500 pieces. Extra charges may apply to track, convert, prepare and store these materials. Emblemtek will only use Madeira Polyneon™, Isacord® 100% polyester threads (not FR rated) or Nomex® flame resistant embroidery threads. A customer service representative will guide you through the evaluation process for custom materials, to determine required specifications and volumes.

Order Quantities:

Minimum 25. The minimum order quantity is 25 pieces.

Pre-production Samples:

Available \$. Electronic (scan) or physical pre-production samples (single unit) are available for approved designs. Samples fees are applicable, relative to design detail and emblem size. See price guide for more information.

Pricing:

Charted & quoted. Charted pricing is available up to a certain size threshold, with larger quantities and larger emblem sizes custom quoted. See price guide for more information.

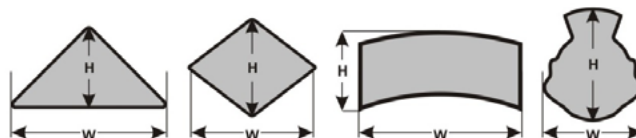
Delivery Times:

Delivery times are relative to order quantity and availability of fabrics and threads. Emblems greater than 6.00" x 6.00" (15.24cm x 15.24cm) may take longer to manufacture. See price guide for more information.

Ordering Guidelines:

Order specifics. During the design, artwork and ordering processes, there are specific details that we require in order to proceed with your request, such as:

- Emblem Type • Design Colours • Fabric Colour • Thread Type (FR rated or Non-FR rated) • Border Colour • Dimensions • Backing Type • Quantity
- Special Delivery Needs



Emblem sizes are calculated by adding the height (h) and the width (w), then dividing by two. Example 2" (h) + 4" (w) = 6 divided by 2 = 3.

Accepted Design / Artwork File Types

The chart below lists the various graphic and design file types that Emblemtek will accept for artwork and production purposes. Certain file types are preferred as noted.

Graphic File Types:

- CorelDraw ver.13 / ver.X3 (.cdr) *pref*
- Adobe Illustrator ver.CS3 (.ai) *pref*
- Encapsulated PostScript (.eps) *pref*
- Adobe Portable Document File (.pdf) *pref*
- Joint Photographic Experts Group (.jpg) *pref*
- Portable Network Graphics (.png) *pref*
- Adobe Photoshop ver.CS3 (.psd)
- Corel Photo-Paint ver.13 / ver.X3 (.cpt)
- Targa Bitmap (.tga)
- Tagged Image File Format (.tiff)
- Windows Bitmap (.bmp)
- CompuServe Bitmap (.gif)

Embroidery File Types:

- Tajima Stitch File (.dst) *pref*
- Wilcom EMB File (.emb) *pref*
- Pulse Embroidery File (.pxf)
- Tajima TBF File (.tbf)
- Barudan Stitch File (.dsb)
- Melco Expanded File (.exp)



To request sample kit or quote, please visit
emblemtek.com/samples-quote/



tel: 800 267 9385
info@emblemtek.com

For complete product details, please visit
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Your notice of
2013-10-16

Your reference
e-mail

our reference
CR/2392_2013

date
2013-12-23

Certification report

1. Description of the tested article as indicated by the client:

quality name: Embroidered label FR on fabric
 dimension: 5cm x 10cm
 description: fabric : blue Nomex BV185
 label : Polymark Embroidered label FR

2. Executed tests:

tests from EN ISO 14116	requirements	result	pass/fail and level
flame spread on logo after 5*(75°C proc 4.8 + tumble dry (80°C)) ISO15797			
Index 1	No flaming to the top or either side edge No flaming debris No afterglow shall spread in the undamaged area	No flaming to the top or either side edge No flaming debris No afterglow	Pass Index 1
Index 2	No flaming to the top or either side edge No flaming debris No afterglow shall spread in the undamaged area No hole formation	No flaming to the top or either side edge No flaming debris No afterglow No hole formation	Pass Index 2

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2013-12-23

page number
2

tests from EN ISO 14116	requirements	result	pass/fail and level
Index 3	No flaming to the top or either side edge No flaming debris No afterglow shall spread in the undamaged area No hole formation After flame of each individual specimen $\leq 2s$	No flaming to the top or either side edge No flaming debris No afterglow No hole formation No after flame	Pass Index 3

tests from EN ISO 11611	requirements	result	pass/fail and level
flame spread on logo after 5*(75°C proc 4.8 + tumble dry (80°C)) ISO15797	Mean after flame ($\leq 2s$) Mean afterglow ($\leq 2s$) in the undamaged area No flaming debris No molten debris No flaming to the top or either side edge No hole formation	No after flame No afterglow No flaming debris No molten debris No flaming to the top or either side edge No hole formation	Pass

tests from EN ISO 11612	requirements	result	pass/fail and level
flame spread on logo after 5*(75°C proc 4.8 + tumble dry (80°C)) ISO15797	Mean after flame, ($\leq 2s$) Mean afterglow ($\leq 2s$) in undamaged area No flaming debris No melting or molten debris No flaming to the top or either side edge No hole formation	No after flame No afterglow No flaming debris No molten debris No flaming to the top or either side edge No hole formation	Pass

Detailed results can be found in:

Centexbel: analysis report 13.03627.01 of 2013-09-13

Kristina De Temmerman
By order of Inge De Witte
Certification Manager