Specifications for Digitally Printed Reflective Signage

2016 - 2017
Introduction

Sherine is the leader in reflective sign printing innovation. We manufacture specialized signage products for demanding environments. Our production facility meets the needs of a diverse group of companies servicing the traffic, wayfinding and safety industries. Quality, expertise and timely project execution ensure the success of our customers and the communities they serve.

Traffic

Sherine is an experienced and dedicated supplier to the traffic industry for over 40 years. From construction signs to highway guide signs, we do it all with detailed precision to meet strict specifications.

Safety

We produce industry specific safety signs with unmatched durability. Electrical, oil & gas, mining and emergency response sectors require high performance signage for safety in critical situations.

Wayfinding

Whether it’s custom wayfinding digital prints or finished signs, we translate design specifications into products that are long-lasting and highly functional.
Reflective Digital Printing
For Signage

Staying at the forefront of digital imaging technology is critical when striving to deliver the best quality product as efficiently as possible.

We digitally direct print onto all grades of 3M™ Reflective Sheeting, with full 7, 10 or 12 year 3M™ MCS™ Warranty. The result is a highly functional and durable sign face that meets strict regulatory specifications while offering the total design flexibility provided by digital printing.

The benefits are tangible:
- Single layer durability
- Fully reflective sign face
- Custom colours and variable messages
- Cost effective production method

For more information about our digital process, see Appendix A.

A fully reflective sign face provides functionality day and night.
As a 3M Certified Digital Fabricator, Sherine undergoes a rigorous annual audit to ensure full compliance with production requirements for the manufacture of regulated traffic signs using 3M™ Reflective Sheeting.

Our digitally printed sign faces are produced in compliance with national and regional regulatory standards, following 3M processing methods, to provide you with the highest quality and longest lasting reflective signage available on the market.

Using 3M™ Reflective Materials, inks and overlaminates, we are able offer 3M™ MCS™ Traffic Warranty on all of our products.

For more information about the 3M Certified Fabricator program, see Appendix B.
3M™ Reflective Sheeting Types

3M™ 7930
Advanced Engineer Grade Prismatic Sheeting
A non-metalized microprismatic reflective sheeting that offers a more uniform visual appearance compared to other prismatic products and a whiter base compared to beaded sheeting.
ASTM: Type I  Warranty: 7 years
Common Use: commercial signs, non-critical traffic control signs, wayfinding and trail system signage.

3M™ 3930
High Intensity Prismatic Sheeting
A non-metalized microprismatic lens reflective sheeting that provides long-term reflectivity and durability with low life-cycle costs, making it an economical solution for reflective signage.
ASTM: Type III / IV  Warranty: 10 years
Common Use: durable reflective traffic control signs and wayfinding programs.
3M™ 4090
Diamond Grade™ DG³ Sheeting
A super-high efficiency, full cube retroreflective sheeting, with the highest retroreflective characteristics at all sight distances, especially when positioned in disadvantaged locations such as overhead or on the left shoulder.
ASTM: Type XI  Warranty: 12 years
Common Use: critical traffic control and wayfinding signs requiring high visibility day and night.

3M™ 1170
Protective Overlay Film
A high performance, optically clear overlay for use on signs made from 3M™ Reflective Sheeting. With anti-graffiti properties, many types of defacement can be removed from this film to substantially restore performance and appearance of the sign.
ASTM: N/A  Warranty: N/A
Common Use: as a protective overlaminate on all grades of 3M™ Reflective Sheeting, to complete 3M’s system of matched components.

For more information about digital printing and Worldwide 3M™ MCS™ Warranty, see Appendix C.
Specifying Sherine Digital Printing for Reflective Signage

Sherine offers the following language for inclusion within the design intent specification:

Sign faces must be produced as single layer panels with overlaminate by a 3M Certified Digital Fabricator.

Graphics must be printed direct to 3M™ 3930* reflective sheeting using 3M™ 8800 Series UV inks, with 3M™ 1170 Overlaminate. All 3M products are to be processed and applied according to 3M specifications.

Sign faces must comply with MUTCD Table 2A-3 Minimum Maintained Retroreflectivity Levels.

Approved process:
Durst Rho 161 TS Digital Printer
Sherine Industries
(604) 513-1887
www.sherineindustries.com

*Insert preferred 3M sheeting type, refer to pages 5-6.
Appendix A
Why this printer?

Sherine Industries constantly strives to provide the best quality signs along with a positive customer service experience. In that vein, we only use the highest quality products and equipment to produce exceptional products for demanding environments. **The Durst Rho 161TS is the first digital printer specifically designed to print on 3M™ reflective material for the traffic sign industry.**

This revolutionary machine gives us the opportunity to offer our clients better products at a faster pace, and help the environment while doing it.

What’s all the Fuss About?

The Rho 161 TS UV Inkjet printer was specifically designed for manufacturing traffic signs. The first of its kind in North America, this wide format digital printer works with all types of 3M™ reflective media.

This roll-to-roll printer prints directly onto 3M™ reflective material. We merely cut the media to size and attach it to the sign substrate saving time and material.

You Want to Talk About Savings?

In our current economic conditions, who doesn’t want to talk about it? This machine allows us to save in several ways; time, material, waste, environmental impact, and of course dollars.

Faster Service

This state-of-the-art printer allows us to fill orders at a faster rate than ever. We can now print 450 sq ft. an hour and by printing directly onto media we can eliminate production steps, increasing speed and efficiency. It also has the versatility to make fast media changes, so we can offer more flexibility when working with multiple medias.

Higher Quality

With the Rho 161’s advanced imaging technology, we can provide top of the line sign media including:

- Maximum printing width of 157.5 cm or 62 inches.
- Maximum length as long as the media roll.
- 3M™ warranty, up to 12 years, promising excellent reflectivity, vibrant colours that meet all regulations and images that last.
- Excellent quality print with 400-600 dpi.

Lean, Green, Printing Machine

The state of the environment is one of the major concerns of our day, and at Sherine we share these concerns. With the help of our innovative new printer, we can now offer the latest in eco-friendly manufacturing. The Rho printer will help us save resources and keep the air cleaner. We envision a new technical business horizon where top quality meets environmental responsibility.
3M Certified Fabricators. Supporting traffic safety engineers all the way.

You carefully engineer the use and placement of traffic signs. Shouldn’t you expect the same duty of care from the people that produce your signs?

3M Certified Fabricators go through a rigorous annual audit to ensure full compliance with production requirements for the manufacture of regulated traffic signs using 3M™ Reflective Materials.

The certification process includes a complete review and onsite audit by our 3M Traffic Safety technical staff. In order to gain 3M Certified Fabricator status, a Fabricator will have shown proficiency in the following areas:

- Expertise required to produce high quality signs in accordance with national and regional regulatory standards
- Correct packaging and shipping capabilities of finished goods
- Essential process materials and process methods, as outlined in the respective information folders and product bulletins
- Accurate dating, identification, and tracking of inputs and finished goods
- Proper material storage practices and production facilities

Why does certification matter?

- Assures the correct materials and processes are used
- Guarantees your signs are covered by the 3M™ MCS™ Traffic Warranty
- Provides efficiencies in your traffic sign supply
- Aids in your traffic sign maintenance program

Please contact your traffic sign fabricator for details on the 3M Certified Fabricator program.

The value of a certified fabricator starts at your planning stages and carries through long after the traffic signs are installed. Look for the 3M Certified Fabricator or 3M Certified Digital Fabricator logo for guaranteed workmanship backed by the 3M™ MCS™ Traffic Warranty as your assurance of quality supply of all your regulated traffic signs.

SHERINE Industries Ltd. #113 19433 96th Ave Surrey, BC V4N 4C4 (604) 513-1887

3M Certified Fabricator

3M Certified Digital Fabricator
2 December, 2015

Mr. Steve Hocaluk
Sherine Industries Ltd.
113 - 19433 96th Ave
Surrey, BC V4N 4C4

Dear Mr. Steve Hocaluk,

RE: 3M Canada Certified Fabricator Program - for Regulated Traffic Signs

To whom it may concern:

The 3M Canada Certified Fabricator Program for Regulated Traffic Signs involves an on-site review of the fabricator's manufacturing facility by a technical representative of 3M Traffic Safety and Security - the manufacturer of the reflective sheeting and inks. This on-site review is to ensure that the fabricator has the correct equipment, materials and expertise at their disposal, to process 3M reflective sheetings, according to 3M recommendations. The Sherine shop was most recently certified on 2 December, 2015, and has maintained that status since 2003.

This letter will confirm that Sherine Industries Ltd. is currently certified under the program cited above, for the manufacture of signs using 3M™ Traffic Safety and Security Division materials including:

3M™ Elecrocut™ 1170 - series acrylic overlay films
3M™ 880UV ink with the Durst Rho 161/162 TS printer and EC - 1170 overlamine

Fabrication of flat and extruded channel signs using processes approved by 3M has been demonstrated.

This certification is valid until 2 June, 2017.

Sincerely,

3M Canada Company

[Signature]

Douglas Bardeau
Senior Application Development Professional
3M Traffic Safety and Security Division
Appendix C
Subject: Digital Printing using Durst RHO 161TS printer

From: Doug Bardeau, Technical Service, Traffic Safety Systems Division

Date: January 5, 2011

TECH ALERT

In addition to the screen printing procedure recommended in Information Folder 1.8, 3M™ series 3930 High Intensity Prismatic, series 3200 Engineer Grade and series 4000 Diamond Grade™ DG³ sheeting may be digitally printed into traffic signs BEFORE mounting on a sign substrate using 3M™ Piezo Ink Jet Series 8800UV and the Durst Rho 161TS Printer.

3M ElectroCut Film 1170 clear must be used as an overlaminate. See Product Bulletin 8800UV. Following all the procedures set out in the product bulletin ensures the finished sign is considered part of the 3M Matched Component System (MCS) and subject to the same performance expectations as a corresponding screen printed sign.

3M assumes no responsibility for failure of sign face legends or backgrounds that have been processed with non-3M process colours or 3M inks other than those listed above.

Should you have any questions please contact 3M Technical Service at 1-800-265-1840 ext 2641.

Reference:
Piezo Inkjet Series UV
for Durst Rho 161TS Printer PB 8800UV
Worldwide 3M™ MCS™ Warranty

What 3M Warrants

Individual Product Limited Warranty. 3M warrants to the Distributor and Graphics Manufacturer that each individual 3M product will be free of the defects listed below, and will perform according to its written characteristics, be suitable for the defined end uses, and perform for the warranted durability period stated in the applicable 3M Product Bulletins in effect at the time of product purchase.

Finished Graphic Limited Warranty. 3M warrants to the End User that graphics made using exclusively 3M graphic products, will be free of the defects listed below, and when used for the defined end uses, and fabricated, installed and maintained according to 3M recommendations, will perform for the warranted durability period stated in the applicable 3M Product Bulletins in effect at the time of product purchase.

The warranties stated in this document are exclusive and are made in place of any and all express or implied warranties or conditions, including any implied warranty of merchantability or fitness for a particular purpose, or any industry practice or custom or trade usage.

The warranties and limited remedies stated in this document may not be modified except in writing and modifications must be signed by the U.S. 3M Commercial Graphics warranty manager.

Failure to follow the instructions contained in 3M’s Product and Instruction Bulletins will void all warranties and limited remedies.

What Defects Are Covered

- **Manufacturing defects** including visual defects and defects that prevent making the intended graphics.
- **Printing and cutting defects** when used with 3M-recommended inks or toners, printers and/or cutting equipment.
- **Finished graphic appearance defects** such as excessive fading, discoloration (including that due to mildewing or wicking on flexible substrates), cracking, crazing, peeling, gloss changes, blistering, excessive dimensional change or loss of adhesion or reflectivity that makes the graphic visually unsuitable for its intended purpose when viewed with the intended lighting, angle and distance for such a graphic, as determined by customary industry standards.
- **Removal defects** for graphic films sold as “removable” or “changeable” that, within the time period and conditions stated in the applicable 3M Product Bulletin, are not removable with less than 30 percent of the adhesive remaining (for “removable” graphics) or with little or no adhesive remaining (for “changeable” graphics). Coverage for removability defects is expressly conditioned on: (A) use of 3M’s recommended removal methods; and (B) notification to 3M no later than five business days after the attempted removal so that 3M may assist in or verify the removal method.

Warranty Limitations

Limitations of Defined End Uses. This warranty only applies to graphic products that are used by trained and qualified graphics manufacturers and installers for the end uses and in the combinations described in 3M’s Product and Instruction Bulletins. For any other use, the user is responsible for determining the suitability of the product and for any and all risk or liability associated with that use or application.

Limitation of Product Misuse. This warranty does not cover graphic products or finished graphics that are modified or damaged through misuse, abuse, accident, vandalism, neglect or mishandling of processed or unprocessed materials by Purchaser or any other person.

Limitation of Glass Breakage. This warranty does not cover glass breakage.

Limitation of Adhesion to Application Surfaces. This warranty does not cover the graphic or damage to the substrate because the layers of the substrate separate due to a lower bond between those layers than the bond between the graphic and the top layer of the substrate.

Limitation of Graphic Removal. This warranty does not warrant against damage to the following substrates resulting from graphic removal even when using a removable or changeable graphic film:

- Any interior painted architectural surface.
- Any surface that has an unstable paint or surface finish.

Limitation of Weathering Effects. Some degradation of materials and graphics over time is considered normal wear. 3M warrants that at the end of the warranty period, the graphics will be in commercially acceptable service condition from normal viewing distances and the 3M graphic products will retain their stated properties.
