

3M Digitally-Imaged Sign Warranty Bulletin

Warranty Information

March 2023



Warranty Coverage Overview

The 3M™ MCS™ Warranty for Traffic and the 3M™ MCS™ Warranty are offered to the sign manufacturer (“Manufacturer”) for a rigid traffic sign (“Sign”). The Manufacturer may extend these warranties to their customers. Additional manufacturer warranties, if any, offered by the Manufacturer are separate and exclusive of the 3M™ MCS™ Warranty.

Warranty for Traffic and 3M™ MCS™ Warranty

The warranty period for eligible graphics is as stated in the warranty matrices found in the appendix at the time that the film was purchased. The warranty period may be reduced and stipulations may apply for certain constructions and applications, as covered in this bulletin. Proof of date of sign manufacture is required. Warranty coverage is contingent upon using the matched component products and processing such products according to all applicable 3M guidelines as described in relevant product bulletins, information folders, and similar product literature. Failure to follow such descriptions and instructions will void all warranties and limited remedies.

Limitation of Liability

3M’s liability under this warranty is limited to replacement as stated herein, and 3M assumes no liability for any incidental or consequential damages, such as lost profits, business or revenues in any way related to the product regardless of the legal theory on which the claim is based. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, THIS WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, RIGHTS OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND THOSE ARISING FROM A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. A BUYER IS RESPONSIBLE FOR DETERMINING IF A PRODUCT IS SUITABLE FOR ITS PARTICULAR PURPOSE AND APPLICATION METHODS. This limitation of liability applies regardless of the legal or equitable theory under which such losses or damages are sought.

3M™ MCS™ Warranty for Traffic

3M warrants (“MCS™ Warranty for Traffic”) that, in Canada, a Sign containing only the standard traffic colours* and black (“Traffic Colours”), made with the purpose of conforming to the standard traffic colours* using the combinations of the 3M retroreflective sheeting (“Sheeting”), the digital printing ink (“Ink”), and the clear overlamine (“Overlamine”) as given in a 3M™ MCS™ Warranty for Traffic Matrix for a digital printer (“Printer”) will, remain legible when viewed from a moving vehicle under normal day and night driving conditions by resisting excessive fading, discolouring, cracking, crazing, peeling, and blistering (“Legibility Warranty”), after cleaning, retain a minimum percentage of coefficient of retroreflection (“Retroreflection Retention Warranty”), for the number of years (“Warranty Period”) as shown in the warranty matrix.

*For specific standard colour information, please see the applicable 3M™ MCS™ Warranty for Traffic Matrix for the Printer.

3M™ MCS™ Warranty

3M also warrants (“MCS™ Warranty”) that, in Canada, a Sign containing any colour not made with the purpose of conforming to Traffic Colours* using the combinations of Sheetting, Ink, and Overlamine as given in a 3M™ MCS™ Warranty Matrix for a Printer, will remain legible by resisting excessive fading, discolouring, cracking, crazing, peeling, and blistering, for the Warranty Period shown in the warranty matrix.

*For specific standard colour information, please see the applicable chart in Appendix.

Limited Remedy

If a Sign is proven not to have met either the MCS™ Warranty for Traffic or MCS™ Warranty, then the owner's exclusive remedy, and 3M's sole obligation, at 3M's option shall be: (a) if this occurs during the Sign Restoration Period as given in the respective warranty matrix, 3M will, at its expense, restore the Sign's surface to its original effectiveness (this remedy shall include only the expense of making the new Sign face including the aluminum Sign substrate, but shall not include other hardware or labour to install the replacement Sign); or (b) if this occurs during the remainder of the Warranty Period as given in the respective warranty matrix, then 3M will furnish only the necessary Sheeting, Overlamine, and Ink quantity to restore the Sign's surface to its original effectiveness.

Terms and Conditions

The Warranty Period is measured from the Sign manufacturing date ("Fabrication Date"). Claims made under this warranty will be honoured only if the Sign was dated on the Fabrication Date using a permanent method (sticker, permanent marker or crayon, metal stamp, etc.), record and retain of such production data traceable to the printed Sign is maintained, and 3M is notified of an MCS™ Warranty for Traffic/MCS™ Warranty ("MCS™ Warranties") claim during the applicable Warranty Period, and 3M is provided with the information reasonably required to validate the claim, and 3M is permitted to verify the cause of the failure.

For the MCS™ Warranties to apply, 3M recommended settings and/or profiles must be used on the Printer applicable for the Sheeting. 3M may revise recommended settings based on internal or external test data, and may update the relevant information folder(s) reflecting any material changes in the recommended settings and/or profiles for the Printer. Failure to use the updated settings and/or profiles will void the MCS™ Warranties. However, such changes in recommended settings does not retroactively invalidate the MCS™ Warranties made prior to such notice.

For the MCS™ Warranties to apply, 3M recommended 3M recommended written processing guidelines are followed during the manufacturing of the Sign, the Sheeting and the Overlamine are applied as recommended, to properly prepared substrates in accordance with 3M recommended procedures. It is the responsibility of the Manufacturer to ensure proper substrate preparation and that approved application procedures are followed, and to maintain production data including but not limited to the Printer profiles, that all 3M recommended procedures are applied, and such data is provided to 3M at 3M's request.

Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct (other than the Limited Remedy stated above), indirect, special, incidental or consequential, regardless of the legal theory asserted. All components involved in the MCS™ Warranties must be stored, applied, installed, processed, and used only as 3M recommends in the relevant product bulletins and other product information such as information folders, and as noted herein. Printer has been maintained according to the Printer manufacturer's recommended maintenance schedule at the time of Fabrication Date, and reasonable maintenance records are provided to 3M at 3M's request.

A Sign's failure to meet the MCS™ Warranties must be solely the result of the design or manufacturing defects of the Sheeting or the matched component materials listed in the respective product bulletin for the Sheeting. 3M has no obligation under the MCS™ Warranties if failure is caused by, including but not limited to, the following: improper fabrication, handling, packaging, storing, shipping, maintenance or installation; non-vertical applications where the Sign is more than +/- 10% from vertical; use of any material or product not included in the respective warranty matrix; use of application equipment not recommended by 3M; failure of sign substrate; loss of adhesion due to incompatible or improperly prepared substrate; exposure to chemicals, abrasion and other mechanical damage; snow burial or any other sign burial; collisions, vandalism or malicious mischief; or an act of God.

3M reserves the right to determine the method of replacement, and any replacement Sign will carry the MCS™ Warranty for Traffic or MCS™ Warranty only for the original Sign's unexpired Warranty Period.

In case the standard warranty for Sheeting, outlined in the respective product bulletin for signage applications, is modified, 3M may change MCS™ Warranties in accordance with the changes in the standard warranty for Sheeting. Such modification does not retroactively invalidate the MCS™ Warranties for a Sign made prior to such modification.

3M makes no warranty or claims that a Sign covered under the 3M™ MCS™ Warranty will meet the colour specifications given in any agency or customer specifications, or ASTM D4956.

3M™ MCS™ Warranty for Traffic Matrix for HP Latex 360/365/370/375/700/800/1500 Printers

Table A – MCS™ Warranty for Traffic Warranty Period and Limited Remedy Matrix for signs with BLACK-ONLY* legends, text, patterns, and symbols printed with HP Latex 360/365/370/375/1500 printers, measured from Fabrication Date in years.

Sheeting	Matched Components		Warranty Type and Period [years from Fabrication Date]			Limited Remedy Type and Period [years from Fabrication Date]	
			Legibility Warranty	Retroreflective Retention Warranty		Sign Restoration	Materials Replacement
				80% of R _A Benchmark	70% of R _A Benchmark		
3M™ Advanced Flexible Engineer Grade Reflective Sheeting 7310	HP360/365/ 370/375 HP Series 831/871	3M™ Protective Overlay Film Series 1160i [†] and 3M™ ElectroCut™ Film 1170C	0-7	0-5 [†]	6-7 [†]	0-5	6-7
3M™ High Intensity Prismatic Digital Sheeting 3930, 3931, 3930UDS, 3931UDS	HP360/365/ 370/375: HP Series 831/871		0-10	0-7 ^{††}	8-10 ^{††}	0-7	8-10
3M™ Diamond Grade™ DG³ Reflective Sheeting 4090, 4091, 4090UDS, 4091UDS	HP700/800: HP832/873		0-12	0-7 ^{†††}	8-12 ^{†††}	0-7	8-12
3M™ Diamond Grade™ DG³ Reflective Sheeting 4081, 4083, 4081UDS, 4083UDS	HP1500: HP Series 881		0-10	N/A	0-7 ^{††††}	0-5	6-7

* Must be printed according to the requirements including printer settings and profiles given in 3M Information Folder 1.17 to qualify for the MCS™ Warranty for Traffic.

[†] The RA benchmarks are the coefficients of retroreflection for white and yellow sheetings, as defined in ASTM D4956, Type I.

^{††} The RA benchmarks are the coefficients of retroreflection for white and yellow sheetings, as defined in ASTM D4956, Type IV. ^{†††} The RA benchmarks are the coefficients of retroreflection for white and yellow sheetings, as defined in ASTM D4956, Type XI.

^{††††} The RA benchmarks are the coefficients of retroreflection for fluorescent yellow and fluorescent yellow-green sheetings, as defined in ASTM D4956, Type XI.

3M™ MCS™ Warranty for Traffic Matrix for HP Latex 360/365/700/800/1500 Printers

Table B – MCS™ Warranty for Traffic Warranty Period and Limited Remedy Matrix for signs containing the standard traffic colours red, blue, green, brown, and purple legends, text, patterns, and symbols printed with HP Latex 360/365/700/800/1500 printers, measured from Fabrication Date in years.

Colour Calibration

Colour calibration must be maintained as per HP requirements. This calibration is required to ensure that finished sign meets ASTM D4956 colour and retroreflectivity requirements.

Sheeting	Matched Components			Warranty Type and Period [years from Fabrication Date]			Limited Remedy Type and Period [years from Fabrication Date]	
				Legibility Warranty	Retroreflective Retention Warranty		Sign Restoration	Materials Replacement
	Printed Traffic Colour	Ink	Clear Overlay Film		80% of R _A Benchmark	70% of R _A Benchmark		
3M™ Advanced Flexible Engineer Grade Reflective Sheeting 7310	Red, blue, green and brown	HP360/365 HP Series 831	3M™ Protective Overlay Film Series 1160i† and 3M™ ElectroCut™ Film 1170C	0-7	0-5†	6-7†	0-5	6-7
3M™ High Intensity Prismatic Digital Sheeting 3930 and 3930UDS	Red, blue, green and brown	HP360/365 HP Series 831		0-10	0-7††	8-10††	0-7	8-10
3M™ Diamond Grade™ DG[‡] Reflective Sheeting 4090	Red, blue, green and brown**	HP700/800** HP Series 832/873		0-12	0-7†††	8-12†††	0-7	8-12
3M™ Diamond Grade™ DG[‡] Reflective Sheeting 4090 and 4090UDS	Purple**	HP1500 HP Series 881		0-8	0-5†††	6-8†††	0-5	6-8

* Must be printed according to the requirements including printer settings and profiles given in 3M Information Folder 1.17 to qualify for the MCS™ Warranty for Traffic.

** Purple excluded for HP700/800 printers

† The RA benchmarks are 70% of the coefficients of retroreflection as defined in ASTM D4956, Type I.

†† The RA benchmarks are 70% of the coefficients of retroreflection as defined in ASTM D4956, Type IV.

††† The RA benchmarks are 70% of the coefficients of retroreflection as defined in ASTM D4956, Type XI.

3M™ MCS™ Warranty Matrix for HP Latex 360/365/700/800/1500 Printers

Table C – MCS™ Warranty Period and Limited Remedy Matrix for Signs containing HP Latex* 360/365/700/800/1500 printed colours, measured from Fabrication Date in years.

Sheeting	Matched Components		Warranty Type and Period [years from Fabrication Date]	Limited Remedy Type and Period [years from Fabrication Date]	
			MCS™ Warranty	Sign Restoration	Materials Replacement
	Ink	Clear Overlay Film			
3M™ Advanced Flexible Engineer Grade Reflective Sheeting 7310	HP360/365/1500 HP Series 831	3M™ Protective Overlay Film Series 1160i† and 3M™ ElectroCut™ Film 1170C	0-5	0-5	N/A
3M™ High Intensity Prismatic Digital Sheeting 3930 and 3930UDS	HP700/800: HP Series 832/873		0-5	0-5	N/A
3M™ Diamond Grade™ DG[‡] Reflective Sheeting 4090 and 4090UDS	HP1500: HP Series 881		0-5	0-5	N/A

3M™ MCS™ Warranty for Traffic Matrix for EFI™ H1625-RS

Table D – MCS™ Warranty for Traffic Warranty Period and Limited Remedy Matrix for standard traffic colours red, blue, green, yellow, brown, purple* and black imaged with the EFI H1625-RS measured from Fabrication Date in years.

Sheeting	Matched Components			Warranty Type and Period [years from Fabrication Date]			Limited Remedy Type and Period [years from Fabrication Date]	
	Printed Traffic Colour	Ink	Clear Overlay Film	Effectiveness Warranty*	Retroreflective Retention Warranty*		Sign Restoration	Materials Replacement
					80% of R _A Benchmark	70% of R _A Benchmark		
3M™ Advanced Flexible Engineer Grade Reflective Sheeting 7310	Red, blue, green, yellow, brown and black	3M™ Piezo Inkjet Series 8900UV Ink	3M™ Protective Overlay Film Series 1160i™ and 3M™ ElectroCut™ Film 1170C	0-7	0-5 [†]	6-7 [†]	0-5	6-7
3M™ High Intensity Prismatic Digital Sheeting 3930DS and 3930UDS				0-10	0-7 ^{††}	8-10 ^{††}	0-7	8-10
3M™ Diamond Grade™ DG ³ Reflective Sheeting 4090DS and 4090UDS				0-12	0-7 ^{†††}	8-12 ^{†††}	0-7	8-12
3M™ Diamond Grade™ DG ³ Reflective Sheeting 4090DS and 4090UDS	Purple			0-8	0-5 ^{†††}	6-8 ^{†††}	0-5	6-8
3M™ Diamond Grade™ DG ³ Reflective Sheeting 4081UDS and 4083UDS	Black			0-10	N/A	0-7 ^{†††}	0-5	6-7

* Red, blue, green, yellow, brown, and purple, as defined in ASTM D4956.

* Must be printed according to the requirements including printer settings and profiles given in 3M Information Folder 1.20 to qualify for the 3M™ MCS™ Warranty for Traffic.

[†] The RA benchmarks are 70% of the coefficients of retroreflection as defined in ASTM D4956, Type I.

^{††} The RA benchmarks are 70% of the coefficients of retroreflection as defined in ASTM D4956, Type IV.

^{†††} The RA benchmarks are 70% of the coefficients of retroreflection as defined in ASTM D4956, Type XI.

3M™ MCS™ Warranty Matrix for EFI™ H1625-RS

Table E – MCS™ Warranty Period and Limited Remedy Matrix for colours other than the standard traffic colours imaged with the EFI H1625-RS* measured from Fabrication Date in years.

Sheeting	Matched Components		Warranty Type and Period [years from Fabrication Date]	Limited Remedy Type and Period [years from Fabrication Date]	
	Ink	Clear Overlay Film	MCS™ Warranty*	Sign Restoration	Materials Replacement
3M™ Advanced Flexible Engineer Grade Reflective Sheeting 7310	3M™ Piezo Inkjet Series 8900UV Ink	3M™ Protective Overlay Film Series 1160i™ and 3M™ ElectroCut™ Film 1170C	0-5	0-3	4-5
3M™ High Intensity Prismatic Digital Sheeting 3930DS			0-5	0-3	4-5
3M™ Diamond Grade™ DG ³ Reflective Sheeting 4090DS			0-8	0-4	5-8

* For printer settings, profiles and requirements, see 3M Information Folder 1.20.

3M™ MCS™ Warranty for Traffic Matrix for Durst 161TS

Table F – MCS™ Warranty for Traffic Warranty Period and Limited Remedy Matrix for standard traffic colours red, blue, green, brown, yellow, purple* and black imaged with the Durst 161TS measured from Fabrication Date in years.

Sheeting	Matched Components			Warranty Type and Period [years from Fabrication Date]			Limited Remedy Type and Period [years from Fabrication Date]	
	Printed Traffic Colour	Ink	Clear Overlay Film	Effectiveness Warranty*	Retroreflective Retention Warranty*		Sign Restoration Period	Materials Replacement
					80% of R _A Benchmark	70% of R _A Benchmark		
3M™ Advanced Flexible Engineer Grade Reflective Sheeting 7310	Red, blue, green, yellow, brown and black	3M™ Piezo Inkjet Series 8800UV Ink	3M™ Protective Overlay Film Series 1160i [†] and 3M™ ElectroCut™ Film 1170C	0-7	0-5 [†]	6-7 [†]	0-5	6-7
3M™ High Intensity Prismatic Sheeting, 3930DS, 3930, 3931**				0-10	0-7 [†]	8-10 [†]	0-7	8-10
3M™ Diamond Grade™ DG [‡] Reflective Sheeting 4090DS, 4090, 4091**				0-12	0-7 [†]	8-12 [†]	0-7	8-12
3M™ Diamond Grade™ DG [‡] Reflective Sheeting 4090DS, 4090	Purple			0-8	0-5 [†]	6-8 [†]	0-5	6-8
3M™ Diamond Grade™ DG [‡] Fluorescent Reflective Sheeting 4081, 4083	Black	3M™ Piezo Inkjet Series 8800UV Black Ink		0-10	N/A	0-10 [†]	0-7	8-10

* Traffic colours red, blue, green, brown, yellow and purple as defined in ASTM D4956.

** 3931 and 4091 print with black only.

[†] The RA benchmarks are 70% of the coefficients of retroreflection as defined in ASTM D4956, Type I.

^{††} The RA benchmarks are 70% of the coefficients of retroreflection as defined in ASTM D4956, Type IV.

^{†††} The RA benchmarks are 70% of the coefficients of retroreflection as defined in ASTM D4956, Type XI.

3M™ MCS™ Warranty Matrix for DURST 161TS

Table G – MCS™ Warranty Period and Limited Remedy Matrix for colours other than standard traffic colours and black imaged with the Durst 161TS measured from Fabrication Date in years.

Sheeting	Matched Components		Warranty Type and Period [years from Fabrication Date]	Limited Remedy Type and Period [years from Fabrication Date]	
	Ink	Clear Overlay Film	MCS™ Warranty*	Sign Restoration	Materials Replacement
3M™ Advanced Flexible Engineer Grade Reflective Sheeting 7310	3M™ Piezo Inkjet Series 8800UV Ink	3M™ Protective Overlay Film Series 1160i [†] and 3M™ ElectroCut™ Film 1170C	0-5	0-3	4-5
3M™ High Intensity Prismatic Sheeting 3930DS, 3930			0-5	0-3	4-5
3M™ Diamond Grade™ DG [‡] Prismatic Sheeting 4090DS, 4090			0-8	0-4	5-8

3M™ MCS™ Warranty for Traffic Matrix for Durst 163TS/HS

Table H – MCS™ Warranty for Traffic Warranty Period and Limited Remedy Matrix for standard traffic colours, red, blue, green, brown, yellow, purple and black imaged with the Durst 163TS/HS measured from Fabrication Date in years.

Sheeting	Matched Components			Warranty Type and Period [years from Fabrication Date]			Limited Remedy Type and Period [years from Fabrication Date]	
	Printed Traffic Colour	Ink	Clear Overlay Film	Effectiveness Warranty*	Retroreflective Retention Warranty*		Sign Restoration Period	Materials Replacement
					80% of RA Benchmark	70% of RA Benchmark		
3M™ Advanced Flexible Engineer Grade Reflective Sheeting 7310	Red, blue, green, yellow, brown and black	3M™ Piezo Inkjet Series 8900UV Ink	3M™ Protective Overlay Film Series 1160i™ and 3M™ ElectroCut™ Film 1170C	0-7	0-5†	6-7†	0-5	6-7
3M™ High Intensity Prismatic Sheeting 3930DS and 3930UDS				0-10	0-7††	8-10††	0-7	8-10
3M™ Diamond Grade™ DG ³ Reflective Sheeting 4090DS and 4090UDS				0-12	0-7†††	8-12†††	0-7	8-12
3M™ Diamond Grade™ DG ³ Reflective Sheeting 4090DS and 4090UDS	Purple			0-8	0-5†††	6-8†††	0-5	6-8
3M™ Diamond Grade™ DG ³ Reflective Sheeting 4081UDS and 4083UDS	Black			0-10	N/A	0-7†††	0-5	6-7

* Traffic colours red, blue, green, brown, yellow and purple as defined in ASTM D4956.

* Must be printed according to the requirements including printer settings and profiles given in 3M Information Folder 1.19 to qualify for the 3M™ MCS™ Warranty.

† The RA benchmarks are 70% of the coefficients of retroreflection as defined in ASTM D4956, Type I.

†† The RA benchmarks are 70% of the coefficients of retroreflection as defined in ASTM D4956, Type IV.

††† The RA benchmarks are 70% of the coefficients of retroreflection as defined in ASTM D4956, Type XI.

3M™ MCS™ Warranty Matrix for Durst 163TS/HS

Table I – MCS™ Warranty Period and Limited Remedy Matrix for colours other than standard traffic colours and black imaged with the Durst 163TS/HS measured from Fabrication Date in years.

Sheeting	Matched Components		Warranty Type and Period [years from Fabrication Date]	Limited Remedy Type and Period [years from Fabrication Date]	
	Ink	Clear Overlay Film	MCS™ Warranty*	Sign Restoration	Materials Replacement
3M™ Advanced Flexible Engineer Grade Reflective Sheeting 7310	3M™ Piezo Inkjet Series 8900UV Ink	3M™ Protective Overlay Film Series 1160i™ and 3M™ ElectroCut™ Film 1170C	0-5	0-3	4-5
3M™ High Intensity Prismatic Sheeting 3930DS and 3930UDS			0-5	0-3	4-5
3M™ Diamond Grade™ DG ³ Prismatic Sheeting 4090DS and 4090UDS			0-8	0-4	5-8



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