



Controltac™ *Plus* Graphic Film IJ380

For solvent based piezo ink jet and screen printing

Product Description

3M™ Controltac™ *Plus* Graphic Film IJ380 is an extremely flexible film, specially designed for the application of large format graphics onto substrates with recesses and 3D corrugations.

Graphic Film IJ380 is suitable for solvent PIJ printing and for screen printing with solvent based inks.

Key Features

- High conformability for applications into recesses and deep channels
- Excellent image performance with solvent, eco-solvent and low solvent piezo ink jet printers
- Screen printable with solvent based ink
- Controltac™ adhesive for easy temporary positioning during application
- Excellent hiding power (opacity)

Controltac™ *Plus* Adhesive

Allows the graphic to be repositioned during application and for easier installation of large formats.

Limitations of End Uses

Specifically, we do not warrant this film for the following:

- Graphics applied to:
 - Stainless steel.
 - Non-3M films (see under Removal)
 - Substrates that do not have a clean, smooth surface.
- Graphic removal from:
 - Applications with poor paint-to-substrate adhesion.
 - Existing graphics that must remain intact. Damage may occur during removal of Film IJ 380.

- Graphic subjected to:
Gasoline vapours or spills at fuel pumps, automobile fuel-tank ports, or top-feeding petroleum tankers.
- Graphics made for automotive Original Equipment Manufacturers (OEM), please contact 3M Automotive Division.

Product Line

		White, semi-gloss
IJ	380-10	<i>with Controltac™ Plus positionable adhesive</i>

Compatible Products

- 3M™ Piezo Solvent Ink Jet Inks
- 3M™ Screen Printing Ink Series 1900 (line colour and 4-colour)
- 3M™ Scotchcal™ Overlamine 8580
- 3M™ Screen Print Gloss Clear 1920
- Selected 3M application tapes

Characteristics

This information is subject to change. These values are typical for unprinted film and are not intended for use in specifications. Be sure this is the most current Product Bulletin. See **3M Related Literature** at the end of this bulletin.

Property	Description
Film	0.05 mm white opaque cast vinyl
Basis weight (film and adhesive)	110 g/m ²
Adhesive type and colour	Positionable, pigmented, permanent, pressure activated
Liner	Polyethylene coated paper, 150 g/m ²
Application surface	Flat, compound curves, recesses and corrugations
Application substrates	Paint, aluminium Other substrates as chrome, glass, and fiberglass reinforced plastics are currently proved for flat applications only.
Application temperature (air and substrate)	15°C – 25°C At higher temperatures the use of application tape is recommended.
Removal	Removal with heat and/or chemicals from most substrates
Service temperature range	-60°C to +107°C
Applied shrinkage	Practically not detectable
Adhesion	Good bond to the above mentioned application substrates
Shelf life	2 years after receipt from 3M (dry conditions, Temp. < 38°C)

Warranted Durability

When manufactured, applied and maintained in accordance with 3M recommended procedures, graphics produced on 3M™ Controltac™ Plus Graphic Film IJ380 protected with 3M™ Scotchcal™ Overlamine 8580 or 3M™ Screen Print Gloss Clear 1920DR will be warranted for a maximum of 5 years (Zone 1*), under the 3M™ MCS™ Warranty Programme.

Zone 1: Northern and Central Europe

Austria, Baltic States, Belgium, Bosnia, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greenland, Hungary, Iceland, Ireland, Italy (North of Rome), Liechtenstein, Luxembourg, Netherlands, Norway, Poland, Romania, Serbia, Slovakia, Slovenia, Sweden, Switzerland, UK

Performance statements are based upon representative experience obtained from testing throughout Europe. Actual performance will be determined by substrate selection, preparation, application and maintenance of the marking and exposure conditions.

When to Use an Overprint Clear or Overlamine

An overprint clear or overlamine provides protection to a graphic as well as providing a uniform gloss level. Typically, only graphics that are subjected to harsh conditions require this protection in order to be warranted. They include:

- Vehicle and fleet graphics; such graphics are subjected to abrasion such as road debris and automatic/power washing.
- Any graphic exposed to abrasive washing conditions, including automatic/power washing, harsh cleaners or chemicals.

Please Note: Unprocessed, i.e. non-printed film does not require an overlamine or clear coat.

Application Tapes

	Prespace Tape	Premask Tape
Unprinted	SCPS-100	SCPS-19
Printed, with overlamine	SCPS-100	SCPS-19
Ink Series 1900	SCPS-100	SCPS-19

See Instruction Bulletin 4.3 for details.

Removal

3M™ Controltac™ Plus IJ380 can be removed with heat and/or with chemicals (within warranted period of time). Removing film IJ380 from pre-existing graphics will damage that graphic.

Related 3M Literature

Listed below is related 3M Technical Literature which may be of interest:

Subject	Product Bulletin	Instruction Bulletin
Design of Markings		2.1
3M™ Screen Printing Ink Series 1900	1900	3.11, 3.12
3M™ Piezo Ink Jet Ink Series 1500	1500	4.35
3M™ Piezo Ink Jet Ink Series 4600	4600	4.30
3M™ Piezo Ink Jet Ink Series 6000	6000	4.39
3M™ Piezo Ink Jet Ink Series 6800	6800	4.40
Scoring and Cutting		4.1
Premasking and Prespacing		4.3
Cold roll lamination		4.22
Surface Preparation		5.41
Application		5.41
Storage, Maintenance and Removal		6.5

Glossary of Terms

Matched Component System™ or MCS™

The system pursuant to which Finished Graphics are produced by a Graphic Manufacturer using only 3M Products and components and manufactured in accordance with 3M's Product or Instruction Bulletins, 3M Specification Document and using 3M Approved Technologies.

3M™ Controltac™ Plus

A film with 3M™ Controltac™ Plus positionable adhesive system has precision-placed microscopic glass spheres embedded within its adhesive layer. These spheres help to prevent the adhesive from fully contacting the application surface until pressure is applied. This enables the graphic to be positioned, then re-positioned as many times as necessary, until it is in exactly the right place before final application.

Permanent Adhesive

Films with a permanent adhesive can be removed but will often require heat and/or chemicals for effective removal.

Health & Safety

Refer to the package label and the Material Safety

Data Sheet for health, safety, and handling information on the products referenced in this bulletin. For 3M products, if necessary, you may contact our Toxicology/Product Responsibility Department on 01344 858000.

Important Notice to Purchaser

The 3M products described in this publication are covered by a 3M warranty and limitation of liability.

3M's warranty provides that if 3M finds that goods are defective in material or workmanship they will be replaced or the price refunded at 3M's option but note that 3M does not accept liability for other direct losses (except for personal injury or death) or consequential losses relating to defective products or from information supplied by 3M.

Purchasers and users of 3M products, and not 3M supplying companies, are always solely responsible for deciding on the suitability of the 3M product for their required or intended use.

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