



Scotchcal™ Graphic Film Series 20

for solvent based piezo ink jet printing

Description

Advantages

- Excellent image performance with solvent based piezo ink jet printers
- Excellent hiding power
- For MCS™ warranted promotional applications
- Film 20-114R is intended for use as printable basefilm and protective overlaminat

Product Line

IJ 20-10R RG 20-10R	White gloss, removable adhesive
IJ 20-20R RG 20-20R	White matte, removable adhesive
IJ 20-114R RG 20-114R	Transparent gloss, removable adhesive

Note: The "RG" product is standard Series 20 Films, which is reversed wound on a 4-notched core for use with the Arizona™ Digital Screen Press

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.

Characteristic	Description
Film	3.5 mil (0.08 mm), white/ transparent vinyl
Thickness (film and adhesive)	0.095 to 0.11 mm
Adhesive type and color	Pressure sensitive, light gray* (*except IJ 20-114) Removable, water based acrylic
Liner	135 g/m ² , paper
Application surface	Flat
Application substrates	Metal, paint, rigid PVC, glass

Minimum application temperature (air and substrate)	10°C
Removal	Removable within the durability of the product
Service temperature range	-50°C to +90°C
Tensile strength (min)	130%
Applied shrinkage	< 0.5 mm
Adhesion (FINAT TM-1, stainless steel, 200 mm/min)	< 10 N/25 mm
Shelf life	2 years after receipt from 3M (dry conditions, Temp. < 38°C)

Effective Performance Life

When manufactured, applied and maintained in accordance with 3M recommended procedures, graphics produced on 3M™ Scotchcal™ Graphic Film Series 20 and protected with selected 3M™ Scotchcal™ Overlaminates a warranty founded on 3M™ MCS™ will be given by 3M. Performance statements are based upon representative experience obtained from testing throughout Europe. Actual performance will be determined by substrate selection and preparation, maintenance of the marking and exposure conditions.

When to Use an Overprint Clear or Overlaminat

An overprint clear or overlaminat provides protection to a graphic as well as changing gloss. 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.

Durability statement for unprinted film

unprinted	24 months
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Note: The mentioned durability is based on average middle European exposure conditions. However, actual performance may vary depending for example on substrate preparation, exposure conditions and maintenance of the marking.

All questions of warranty and liability relating to this product are governed by the respective 3M Terms of Sale subject, where applicable, to the prevailing law.

MCS™ Warranted for printed Scotchprint® Graphics

	Geographical Zone		
	1	2	3
printed	6 months		

Note: The 3M MCS™ warranty statement for Scotchcal™ Graphics Film Series 20 is based on chosen media construction. The mentioned warranty period might need the use of a protective clear or overlamine. Please refer to the European MCS™ Product Warranty Chart for details about recommended graphic constructions and detailed information about the geographical zones.

The Product Warranty Chart is available on request from your local 3M contacts.

Limitations of End Uses

Film 20-114R is not recommended for wet application method.

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

- Graphics applied to:
 - Corrugated or highly irregular surfaces or sharply raised areas such as huck bolts.
 - Substrates that do not have a clean, smooth surface or have poor paint-to-substrate adhesion.
 - Stainless steel.
 - Flexible substrates.
 - Compound contours.
 - Exterior horizontal applications.
- Graphic removal from:
 - Existing graphics that must remain intact.
- Graphics subjected to gasoline vapours or spills.

Application Tapes

Overlamine or Overprint Clear	Prespace Tape	Premask Tape
Printed, uncleared	SCPS-100	SCPM-19
Printed, cleared or overlaminated	SCPS-100	SCPM-19

See Instruction Bulletin 4.3 for details.

Removal

Series 20 Graphics Films can be removed within the durability period.

We recommend to remove Series 20 films without heat.

Important Notice

This bulletin provides technical information only. All questions of warranty and liability relating to this product are governed by the terms and conditions of the sale, subject, where applicable, to the prevailing law. Before using, the user must determine the suitability of the product for its required or intended use, and the user assumes all risk and liability whatsoever in connection therewith.

3M Related Literature

3M offers for all products detailed technical literature. Additionally, comprehensive instruction bulletins are available describing in detail the best usage of our products.

Ask your local 3M contacts or refer to local Commercial Graphics internet pages to get the most current product and/or instruction bulletins.

For Further Assistance

For help on specific questions relating to 3M Commercial Graphics products, please contact your local 3M Technical Service person or contact:

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The use of trademark signs and brand names in this bulletin is based upon US standards. These standards may vary from country to country outside the USA.