

March, 2019

3M™ Scotchcal Label Material 3690E+

Product Description

3M™ Scotchcal™ Label 3690+ utilizes a durable PVC facestock and a special modified acrylic adhesive. The adhesive is designed to adhere well to difficult surfaces such as rough and porous substrates, and low surface energy materials such as polyethylene and polypropylene. It is suitable for outdoor applications, which require a high degree of durability. Their thin caliper and flexibility allow for conformance to small diameter and complex curved surfaces.



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Technical Information Note

The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Typical Physical Properties

Property	Values	
Facestock	White Gloss Vinyl	
Facestock Thickness	0.05 mm	2 mil
Adhesive	320	
Adhesive Thickness	0.035 mm	1.3 mil
Liner	Densified Paper, C2S	
Liner Thickness	0.12 mm	4.7 mil

Note

Calipers are nominal values

Typical Performance Characteristics

Property	Values	
Minimum Application Temperature	10 °C	50 °F

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Typical Performance Characteristics (continued)

Typical Performance Characteristics:

Dimensional Stability (acc. to DIN 30646, when adhered)	Classification Number 05 Shrinkage ≤ 0.5 %
Adhesion Strength Adhesive Bond Level (DIN 30646) to Aluminium to Stainless Steel	T (≥ 25N/25mm) 28N/25mm 28N/25mm
Temperature Resistance (when adhered to Aluminium)	Short Term -40 °C to +150 °C Long Term -40 °C to +90 °C
Fire Behaviour (DIN 75200, adhered to metal substrate)	Self-extinguishing
Salt Resistance Test (ISO 9227)	150 hours
Min Service Temperature	+4 °C
Substrate Corrosion	Does not cause corrosion of adhered substrate
Exposure to sulfur dioxide containing atmosphere in weather chamber (DIN 50018, 2 Cycles)	No change

Available Sizes

Packaging

Finished labels should be stored in plastic bags.

Typical Environmental Performance

Chemical and Environmental Exposure:

These films are resistant to most mineral oils and greases, fuels, aliphatic solvents, weak acids, salts and alkalis, such as:

Chemical Agent / Time*	Result
Heptane	resistant
Diesel oil	resistant
Motor oil	resistant
Windscreen cleaner	resistant
Isopropanol	resistant
Industrial Cleaner (Lime based)	resistant
Washing liquid	resistant
Aqueous Acid (pH 4)	resistant
Aqueous Base (pH 10)	resistant

*Film adhered to stainless steel, immersed in the above mentioned agents for 4 hours (at Room temperature)

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Handling/Application Information

Application Ideas

- Bar code labels and rating plate labels for demanding industrial or equipment applications.
- Durable goods labeling.
- Conformable to small diameter and complex curved surfaces.

Application Techniques

For maximum bond strength, the surface should be clean and dry. Typical cleaning solvents are heptane and isopropyl alcohol.*

For best bonding conditions, application surface should be at room temperature or higher. Low temperature surfaces, below 50°F (10°C), can cause the adhesive to become so firm that it will not develop maximum contact with the substrate. Higher initial bonds can be achieved through increased rubdown pressure.

*When using solvents, read and follow the manufacturer's precautions and directions for use.

Printing

Best results were obtained with screen printing. A colour qualification test is recommended for the manufacturing process.

Note: It is recommended also to test the colour when needed for chemical resistance.

The special surface coating of the 3M Thermal Transfer printable films is well suited for colour printing via Thermal Transfer printing. The visual appearance and print durability is dependent on the ribbon used. In order to achieve an optimal print image, the print speed and the transfer temperature may need adjustment.

Converting

Sharp knives as well as minimal tension are recommended to minimize possible buildup of adhesive residue.

Storage and Shelf Life

Store at 61 °C – 77 °C and 40 – 65 % relative humidity. The product can be stored up to 24 months after manufacturing.

It is recommended to store converted products in plastic bags.

Industry Specifications

UL recognized for indoor and outdoor use in
Files MH18072, PGJ12

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Trademarks

3M is a trademark of 3M Company.

Alconox is a registered trademark of Alconox, Inc.

Formula 409 Cleaner is a registered trademark of Clorox, Inc.

ISO Statement

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.

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Information

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3M United States
3M Center
St. Paul, MN 55144-1000
800-362-3550
www.3M.com

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