PROTECTIVE MATERIALS PRODUCT BULLETIN

Protective Material PM-2740

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INTRODUCTION

3M™ Protective Material PM-2740 is a mildly cationic emulsion developed for use as a fabric stain release treatment. The product is formulated without the use of fluorinated chemistry

When fabrics are properly treated with PM-2740 most stains are generally removed with one home laundering. For stubborn stains, additional washes may be required for complete stain removal.

Branding: Only if the formulation meets stringent quality performance specifications are you entitled to make use of the Scotchgard™ Brand name, and provided you are an official licensee of 3M.

Environmental: PM-2740 does not contain alkyl phenol ethoxylate (APE) surfactants, and is not based on perfluoroalkyl chemistry including PFOS or PFOA. It is not made, and does not degrade to, any perfluoroalkyl substance including PFOS or PFOA.

TYPICAL PROPERTIES

Appearance	Opaque White Low Viscosity Liquid
Typical Analysis	25% Solids 75% Water
Charge	Mildly Cationic
Density	1.06 kg/L (8.8 lbs/gal)
pH	3-6
Flash Point	None
Boiling Point	100°C (212°F)
Shipping and Storage	Non-Red Label

PM-2740 should not be stored at temperatures higher than 42°C (108°F). Prolonged exposure to such temperatures may damage the 3M product. PM-2740 must be protected from freezing. If frozen, the product will be permanently damaged.

APPLICATION

The application level of 3M Protective Material PM-2740 on the fabric may vary. Factors such as fiber content, chemical additives and treating conditions will influence what levels are needed to achieve the required performance.

PM-2740 typically will be applied by padding. The normal application range of PM-2740 is 50-80 grams/liter in the finishing pad bath. Padding can be accomplished on regular mill pad equipment (two roll or three roll), consistent with the usual procedure for applying resin finishes. Bath temperatures of 15–40°C (60–100°F) are generally suitable.

Fugitive wetting agents, such as isopropyl alcohol, or *non*-rewetting surfactants should be used whenever necessary to achieve adequate wetting of the fabrics and proper penetration of the finish. We recommend the addition of 1 g/L *non*-rewetting surfactant or 10–30 g/L alcohol to the treating bath.

CAUTION! Isopropyl alcohol is considered flammable. Follow all safety procedures. Additionally, some fugitive wetting agents may also have lower flash points. Consult alcohol, wetting agent (and any other auxiliary) SDS for safe handling practices. *Never add alcohol to a bath which already contains a fluoropolymer emulsion resin, because immediate flocculation will occur.*

USE OF SOFTENERS

Softener selection is important in any stain release protective treatment. Softeners (particularly those containing silicone) can have a negative effect on repellency and stain release properties. Refer to product information from the supplier of those materials. It is the responsibility of the user to adequately screen the effects of softeners (or any other auxiliaries) on stain release performance.

TYPICAL FORMULATIONS FOR THE APPLICATION OF PM-2740

The following recommendations are offered as a guide. Many products are suitable for use with PM-2740. It is strongly recommended that a product/formation be evaluated in the laboratory, both for compatibility and performance.
Note: We recommend the addition of 1 g/L *non*-rewetting surfactant or 10-30 g/L alcohol, especially for "hard to wet" fabrics.

Pad Application *(Note: If using a pad/vacuum procedure, adjust the formulation to compensate for lower wet pick-up)*:

A. 100% Cotton (Approximately 70% WPU)
   0–100 g/L Glyoxal Resin
   0–20 g/L Catalyst (if using glyoxal resin)
   5–30 g/L Polyethylene Softener
   50–80 g/L PM-2740

B. Cotton Blends (Approximately 70% WPU)
   0–60 g/L Glyoxal Resin (if required)
   0–15 g/L Catalyst (if using glyoxal resin)
   5–20 g/L Polyethylene Softener
   30–60 g/L PM-2740
   30–60 g/L PM-226

DRY AND CURE CONDITIONS

The dry and cure for PM-2740 can be accomplished in either a one- or two-step process. Depending on mill practice, the product can be dried on fabric at temperatures used for normal heat setting or fabric finishing. When the fabric is cured at the mill it should be done in accordance with the recommendations for the resin finish. Typical curing temperatures are in the range of 150–180°C (300–350°F).

ENVIRONMENTAL HEALTH AND SAFETY

Before using this product, please read the current PM-2740 Safety Data Sheet (available through your 3M sales or technical service representative), and the precautionary statement on the product package. Follow all applicable directions.

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