

Protective Chemical

PM-4700

INTRODUCTION

Properties: PM-4700 is a water miscible fluorochemical compound designed to impart excellent and durable water, oil and stain repellent properties on all types of vulnerable leathers for garments, shoe uppers and upholstery. PM-4700 can also impart resistance to salt staining, acid and alkali protection. PM-4700 can also be used in the manufacturing of washable leathers. PM-4700 can also improve the dynamic water resistance, and gives leveling of waterproofing treatments (different leathers in the same batch and different batches). The treatment is colorless and odorless, and has minimal to no influence on the natural feel and look of the leathers. The breathability of the leathers is not affected by the application of this product.

Use: As PM-4700 is an anionic product, it can be used in the wet end operation, e.g. fatliquoring or after treatment operations.

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

Environmental: PM-4700 does not contain alkyl phenol ethoxylate (APE) surfactants, and is not based on PFOA or PFOS chemistry. It is not made with and does not degrade to PFOA or PFOS. The active ingredient of PM-4700 is not a chlorofluorocarbon (CFC), associated with ozone depletion.

TYPICAL PROPERTIES

Appearance	Off-white Emulsion, the product can contain a slight amount of sediment
Typical Analysis	30% Solids 60% Water 8% Ethyleneglycol 2% Emulsifier
Charge	Anionic
Density	1.1 kg/l (9.2 lb./gal)
pH	6.5–7.5
Shipping & Storage	Non-Red Label Flash point: Setaflash Closed Cup >95°C (>210°F) Boiling point: >100°C (>212°F) PM-4700 should not be stored at temperatures >40°C (>104°F). PM-4700 is freeze/thaw stable to -23°C (-10°F).

If exposed to freezing temperatures, return slowly to room temperatures before using; avoid agitation during thawing process.

Shelf life 2 year from date of manufacture

TYPICAL APPLICATION (Drum Application)

The most appropriate application procedure will depend on the leather article, the nature of the raw material, and on the specific tannery processes.

In general, two typical application procedures are recommended: application in the fatliquoring float, or application as an after treatment in a new float. It is also possible to use a combination of both processes to optimize the performance results.

After treatment. The after treatment is done after all the normal wet end processes are completed. For this type of application 4%–8% PM-4700, based on shaved weight, is added to a new float. The new float is typically 200% to 1000% water, preferably with a pH of minimum 4, and a temperature around 50°C. Under these conditions, the exhaust process is typically completed after 45 minutes. After the exhaust of PM-4700, the float is preferably acidified with formic acid to a pH of approximately 3.5, using standard tannery procedures. Finally the float is drained, and the leather washed according to normal tannery procedures.

In case waterproof leather is produced, and a chrome fixation is required, PM-4700 can be applied before or after the chrome fixation process.

Application during the fatliquoring process: For this process 4% to 8% PM-4700, based on shaved weight, can be applied before, after, or together with the fatliquors in the same float, without further modification to the leather production process. This process results in a better penetration of PM-4700 in the leather structure, which can be advantageous for the production of waterproof leather or nubuc leather via the direct process.

Remarks:

PM-4700 is preferably diluted with water, before addition to the drum.

Hydrophobic fatliquors are highly recommended to improve protection, especially regarding dynamic water repellency.

If PM-4700 is mixed with other leather chemicals, or if PM-4700 is used in the same float with other leather chemicals, it is highly recommended to check the compatibility of the used materials.

The stability of diluted PM-4700 is affected by the hardness of the water, it is recommended to avoid the use of water with more than 20 German degrees hardness.

DRY AND CURE CONDITIONS

In general the normal tannery procedures are adequate. In order to develop the maximum performance, the leathers should be properly dried in an oven of a minimum 50°C (120°F).

ENVIRONMENTAL, HEALTH & SAFETY

Normal care should be taken to avoid skin contact, eye contact and prolonged breathing of vapours or dusts. Hands should be washed prior to smoking or eating. Before using this product, please read the current PM-4700 Material Safety Data Sheet (available through your local representative), and the precautionary statement on the product package. Follow all applicable directions.

Appropriate precautionary measures should be taken when handling and working with solvents (follow supplier's directions).

PM-4700 should not be used in aerosol applications.

Important Notice to Purchaser:

The information in this publication is based on the tests we believe are reliable. Your results may vary due to differences in test type and conditions. You must evaluate and determine whether the product is suitable for your intended application. Since conditions of product use are outside of our control and vary widely, the following is made in lieu of all express or implied warranties (including the warranties of merchantability or fitness for a particular purpose). Except where prohibited by law, 3M's only obligation and only remedy, is replacement or, at 3M's option, refund of the original purchase price of the product that is shown to have been defective when you received it. In no case will 3M be liable for any direct, indirect, special, incidental, or consequential damages (including, without limitation, lost profits, goodwill, and business opportunity) based on breach of warranty, condition or contract, negligence, strict tort, or any other legal or equitable theory.



**3M Protective Materials and
Consumer Health Care Division**
3M Center, Bldg. 223-4N-17
St. Paul MN 55144-1000
USA
Tel. +1.651.736.8032
Fax. +1.651.736.1587

3M Belgium N.V.
Haven 1005, Canadastraat 11
B-2070 Zwijndrecht, Belgium
Tel. +32 / 3 / 250 78 87
Fax. +32 / 3 / 250 78 47

3M Asia Pacific Pte. Ltd.
3M Innovation Centre
100 Woodlands Ave 7
Singapore 738205, Singapore
Tel. +65.6849.3423
Fax. +65.6757.3928